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* Indicates that reports in the BIOS, CIOS and FIAT series are deposited in the Library of Congress Depository Libraries. For a complete list of these libraries, see page facing page 1, volume 5, of this Bibliography.

In addition to the indexes described on the back cover of this Bibliography, the Office of Technical Services has published the following reference works:

PB L 58101-R. SWIFT, GRACE. Government document series, analyzed by Office of Technical Services. Rev. Nov 1947. 45 p. Price: 25¢

PB L 78000. LOWRY, W. KENNETH. OSRD reports: Bibliography and index of declassified reports having OSRD numbers. Jun 1947. 105 p. Price: 75¢

PB L 79322. SWIFT, GRACE and ORNE, JERROLD. Subject headings for technical libraries. Jun 1947. 167 p. Price: $1.50

PB L 81803. U. S. OFFICE OF TECHNICAL SERVICES, TECHNICAL INDUSTRIAL INTELLIGENCE DIVISION. Reports resulting from the investigation of German technology, 1945-1946, and index of personnel. May 1947. 207 p. Price: $5.25

Erratum:

v. 4, p. 605. PB L 40013 is incorrectly entered as PB 50013. A correct entry has been made in v. 5, p. 1116.

CHEMICALS AND ALLIED PRODUCTS

Drugs and Pharmaceuticals

PB L 81827. BLUMENTHAL, L. M. Production of suprifen at Farbwerke, Hoechst, Germany. (JIOA Rept 41) Aug 1947. 3 p. Price: Mimeo-25¢

Suprifen (p-hydroxy ephedrine) is a circulatory tonic and cardiac stimulant of considerable interest. The method for its commercial production is given.

PB L 81367. KERN, J. G. and others. Manufacture of antipyrine and pyramidon at I. G. Farbenindustrie A. G., Hoechst. (FIAT Final Rept 1023) Jun 1947. 67 p. Price: Mimeo-$1.75

Antipyrine and pyramidon have been manufactured in large volume at I. G. Farbenindustrie A. G., Höchst. The prior intermediates, phenylhydrazine and phenylmethylpyrazolon, were also manufactured at Höchst in neighboring buildings. Processes are presented for end products and intermediates. The plants are described briefly, and capacity analyses are given in some detail for antipyrine and pyramidon.

PB L 81281. WIGGINS, ALPHA M. Preparation of Rochelle salt crystals. (FIAT Final Rept 1146) May 1947. 7 p. Price: Mimeo-25¢

Details of the processes used for growing Rochelle salt crystals from the solution are described in this report. The methods of cutting the crystals and the tools used for cutting are described, along with the methods of applying electrodes and the material used in the electrodes.

Dyes

PB L 74778. I. G. FARBENINDUSTRIE A. G. Card index on dyes. (FIAT Microfilm Reel M 124, Frames 8859-9999, 1-880) 1927-1943. 1111 f. Price: Microfilm-$6.00 - Enlargement print-$111.50

This FIAT microfilm reel contains index cards on organic dyes in alphabetical order. Data on production, composition, structural formulas, trade names, as well as patent numbers and other references are included. In German.

PB L 28000. JULIUS and others. Thioderivatives of the Quinones and hydroquinones. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7290-7379 of FIAT Microfilm Reel 5 A) Apr 1905. 46 f. Price: Microfilm-$1.25 - Enlargement print-$5.50.

This report investigates a patent application regarding the preparation of sulfur dyes from quinone and hydroquinone derivatives. The essential subjects of examination are : the effect of sulfurizing agents on quinones, specification and description of the individual primary products of sulfurization ; experiments for the preparation of 2.6 - dichloro hydroquinone monothiosulfonic acid from 2.6 - dichloro hydroquinone with thiosulfate and chromic acid ; products resulting from the action of thiocyanic acid on quinones ; effect of trithiocarbonic acid on quinones ; conversion products derived from primary sulfurized hydroquinones ; primary products resulting from the action of dilute hydrochloric acid on hydroquinone xanthogenate and hydroquinone thiocarbaminate. The so-called "Wöhler" substances - addition products of hydrogen sulfide and quinone- are discussed. In tracing their mode of formation it is concluded that: (1) the "Wöhler" substances are no chemical entities ; (2) none of the synthetic substances described is contained to a major proportion in "Wöhler's" substances; (3) it may be possible by thorough studies to separate chemical entities from these substances. The results of the foregoing investigations are summed up as follows : No chemical entities were obtained from the quinone or its derivatives with hydrogen sulfide, sodium sulfide or alkali polysulfides. But all products thus obtained gave (in alkaline solution) blue dyes with dimethyl p phenylene diamine thiosulfonic acid. The claim of a patent regarding substances obtained directly from quinone or its derivatives as denoted above appears unjustified. This document consists of two parts. The second part contains a list of the 40 compounds investigated. In German.

PB L 28001. JULIUS and FUSSENEGGER. "Salycinschwarz VT, Kalle." (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7380-7385 of FIAT Microfilm Reel 5 A) May 1905. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50.

Analysis of "Salycinchwarz VT, Kalle," proved that this product was a mixture of several types of which 1 - amino- 2 - naphthol - 4 - sulfonic acid and β- naphthol were the essential components. In German.

PB L 28002. JULIUS and BLANGEY. Process for the preparation of monochloro - 1 - naphthol. Patent application K 27886 IV/12c, Kalle. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7386-7390 of FIAT Microfilm Reel 5 a) May 1905. 3 f. Price: Microfilm - $1.00 - Enlargement print-$1.50.

Investigations confirmed the statements made in the patent application : Monochloro - 1 - naphthol is a uniform substance. It corresponds to the chloro-naphthol of the chemical formula In German.

PB L 28003. JULIUS and MUNCH, E. Effect of formaldehyde on thiosulfuric acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7391-7393 of FIAT Microfilm Reel 5 A) May 1905. 2 f. Price: Microfilm - $1.00 - Enlargement print-$1.50.

It was observed that a sodium thiosulfate solution to which formaldehyde and hydrochloric acid were added fails to give a sulfur precipitate, even if the effect lasts for several days. The supposed reason of this phenomenon is discussed and found to be a sodium hydroxymethylenthiosulfate as had been observed before by Vanino, though this intermediate compound could not be obtained by either of the research workers - yet an odor of leek had been observed in both cases. In German.

PB L 28004. JULIUS and GUDLICH. New process for the preparation of p - amino dimethylaniline thiosulfonic acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7394-7404 of FIAT Microfilm Reel 5 a) May 1905. 7 f. Price : Microfilm - $1.00 - Enlargement print-$1.50.

A new process was checked by which a solid thiosulfonic acid is obtained by reacting equimolar amounts of p - amino dimethyl aniline and p - nitrosodimethylaniline with thiosulfate solution of weak acetic acid to form p - amino dimethyl aniline thiosulfonic acid. No oxidizing agent is necessary. In German.

PB L 28005. FUSSENEGGER. "Braunsalz O" (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7408-7411 of FIAT Microfilm Reel 5 A) May 1905. 2 f. Price: Microfilm-$1.00 - Enlargement print-$1.50.

Chemical analysis of the above substance showed its com-

position of equal amounts of the hydrochlorides of mono aceto m phenylene diamine and potassium ferrocyanide. In German.

PB L 28006. JULIUS. Re - testing of German patent application A 10917 IV/22a., Geigy. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7412 - 7423 of FIAT Microfilm Reel 5 A) Jun 1905. 8 f. Price: Microfilm-$1.00 -Enlargement print-$1.50.
This document contains detailed discussions on the analysis of 5 blue and black "Eriochrome dyes" By Geigy. In German.

PB L 28007. ABEL. Checking of patent application P 18216 IV/22a. Höchst. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7424-7427 of FIAT Microfilm Reel 5 A) Jul 1905. 2 f. Price: Microfilm-$1.00 - Enlargement print-$1.50.
A process for the preparation of a mono azo dye suitable for producing blue lacquer dyes was developed by combining the diazo compound of 1 - amino - 4, 5 - dichloro benzene 2-sulfonic acid with β-naphthol. The process was confirmed by re- examination. The copy is almost illegible. In German.

PB L 28008. JULIUS and FUSSENEGGER. Checking of U.S. patent 790364 of May 23, 1905 (Geigy in Basel) and examination of the dye obtained. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7428-7433 of FIAT Microfilm Reel 5 A) Jul 1905. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50.
An analysis of the dye, the preparation of which was claimed in the patent, revealed the dye to be the combination of diazotized 1.2 - aminonapthol 4 sulfonic acid + β naphthol - 6 sulfonic acid. In German.

PB L 28024. JULIUS and BLANGEY. Azo dyestuffs from p-amino-p'-dimethylaminodiphenylamine-o-sulfonic acid and p-amino-p'-phenylaminodiphenylamine disulfonic acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7527-7533 of FIAT Microfilm Reel 5 A). Oct 1905. 4 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Experiments are reported for the preparation of azo dyestuffs from p-amino-p'-dimethylaminodiphenyl amine-o-sulfonic acid and from p-amino-p'-phenylamino diphenylamine disulfonic acid. Comparison with other similar types is made - which showed that the new compounds did not present any improvement. Description of the experiments are given, as well as color charts. In German.

PB L 28025. JULIUS and BUSSENEGGER. Eriochrome blue-black RL and eriochrome black B, Geigy. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7534-7539 of FIAT Microfilm Reel 5 A). Oct 1905. 4 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The analysis of eriochrome blue black RL proved it to be identical with a black dye analyzed previously. "Eriochrome black B" was identified as a mixture of "Eriochrome blue black" and "Eriochrome black A". Detailed descriptions of the analytical methods are added. In German.

PB L 28026. JULIUS and BLANGEY. Preparation of triphenylmethane dye similar to patent blue. (I. G. Farbenindustrie. Journal of Central Laboratory for dyestuffs). (Frames 7540-7549 of FIAT Microfilm 5 A). Oct 1905. 6 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
This document contains a detailed description of the preparation of a dye of which the essential feature is the condensation of sulfoacetyl metanilic acid with tetramethyl-diamino diphenylcarbinol. Nothing is stated about the qualities of this dye. In German.

PB L 28027. FUSSENEGGER. Anthracenechrome blue F, G, BB. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7550-7554 of FIAT Microfilm Reel 5 A). Oct 1905. 3 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Anthracene blue F was homogeneous, consisting of o-amino-p-acetamino phenol and 1,8-dihydroxy-naphthalene-3,6-sulfonic acid. G, also homogeneous, consisted of o-amino-p-acetamino phenol and 1-amino-8-naphthol-4-sulfonic acid. BB was a mixture G and B, a commercial name of the same firm examined earlier. In German.

PB L 28028. JULIUS. Salicin black UTG Kalle. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7555-7557 of FIAT Microfilm Reel 5 A). Oct 1905. 2 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Analysis of salicine black UTG, Kalle, showed that this dye is essentially the same as the previously examined salicine black UT Kalle, the principal component in both dyes being formed by 1-diazo-β-naphthol-4-sulfonic acid and β-naphthol. In German.

PB L 28029. JULIUS and FUSSENEGGER. Anthracene chrom blue R and B, Cassella. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7558-7566 of FIAT Microfilm Reel 5 A). Nov 1905. 6 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Analysis of anthracene chrom blue R, Cassella, proved that this dye is the combination of 2,4-amino-phenol-6-sulfonic acid, acylated on the amino group in the 4-position, diazotized and coupled with β-naphthol. Anthracene blue B consist mainly of R plus an additional dye. In German.

PB L 28030. JULIUS and FUSSENEGGER. Analysis of substantive blue Oehla 5653. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7667-7574 of FIAT Microfilm Reel 4 A). Nov 1905. 5 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Analysis confirmed this blue to be a combination of 1) o-toluidine with R-acid and m-hydroxydiphenylamine, 2) poly sulfonic aniline blue, 3) Anilin salt, 4) Sodium chloride, Glauber's salt. In German.

PB L 28031. LOHSE. Process for the production of 2-amino-5-nitrophenol and a dye from this compound with 2 amino 3 naphthol-6-sulfonic acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7575-7578 of FIAT Microfilm Reel 5 A). Nov 1905. 3 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
This document is written in faded German script and hence is illegible.

PB L 28032. GUHLICH. Re-testing the patent application for the production of 1-diazo-2-hydroxy-and 2-diazo-1-hydroxy naphthalene. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7579-7581 of FIAT Microfilm Reel 5 A). Nov 1905. 2 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The re-testing of the above patent application proved both compounds to be excellent dyes. They were obtained by diazodizing the hydro-chlorides of the corresponding amino naphthols, according to standard methods. The patent was granted. In German.

PB L 28033. GUHLICH. Experiments for substituting the diazogroup in hydroxydiazo compounds of the naphthalene series by hydrogen. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7582-7586 of FIAT Microfilm Reel 5 A). Dec 1905. 3 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Starting from naphthylamine sulfonic acids having one sulfonic acid group in p- and one in o- position to an amino group, the amino group was diazodized. The sulfonic acid group in o-position to the diazo group was subsequently

replaced by hydroxyl. By coiling the obtained diazo naphthol sulfonic acid with zinc just the diazo group is finally replaced by hydrogen. This procedure proved to be a basic one for obtaining starting materials of the naphthol series for dyes having an analogous constitution. In German.

PB L 28034. JULIUS and FUSSENEGGER. Analysis of azo cerise M, Kalle. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7587-7600 of FIAT Microfilm Reel 5 A). Dec 1905. 8 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The analysis of azo cerise M, Kalle confirmed that the dye consists of a combination of 2 dyes: 1. o-amino azo toluene and α-naphthol-3.6-disulfonic acid mixed with 2. a combination of o-amino azotoluene and β-naphthol-3,7-disulfonic acid. In German,

PB L 28035. HAECKEL. Re-testing German patent application F 19946 IV/22a Höchst. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7601-7605 of FIAT Microfilm Reel 5 A). Dec 1905. 3 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The re-testing of the above patent confirmed that the blue dye from 2-amino-4-chlorophenol and chromotropic acid had fine washing and dyeing qualities. This is a short document. In German.

PB L 28036. JULIUS and FUSSENEGGER. Investigation of diazo dye suitable for the preparation of color lacquers from diamino-p-dixylylonethane and R-salt. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7606-7610 of FIAT Microfilm Reel 5 A). 3 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
This document contains investigations of a diazo dye, suitable for the preparation of color lacquers from diamino-p-dixylylmethane and 2 R-salt, which is compared to an older dye Brillantcarmin L (diamino dixylyl-phenylmethane and 2 R-salt). In German.

PB L 28037. LUTTRINGHAUS. Blue sulfur dye from 4-cyanomethyl-otoluidine. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7611-7619 of FIAT Microfilm Reel 5 A). Dec 1905. 5 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
A blue sulfur dye is produced from nitrosophenol by condensation with omega-cyanomethyl o-toluidine in sulfuric acid. The resulting indophenol is treated immediately in this sulfuric acid solution with sulfurylchloride and the substance thus obtained is precipitated in water, and finally heated with polysulfide. This document is written in German script.

PB L 28038. JULIUS and BRAREN. Analysis of thiogene purpurine O, Höchst. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7620-7626 of FIAT Microfilm Reel 5 A). Dec 1905. 4 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
This document is completely faded and illegible. In German.

PB L 28039. FUSSENEGGER. Analysis of Lacquer Bordeaux B, and Lacquer Violet R, Berlin. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7627-7631 of FIAT Microfilm Reel 5 A). Jan 1906. 3 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Analysis of lacquer Bordeaux B proved it to be a combination of o-chloro-p-anisidin and R-salt. Lacquer Violet R, Berlin is a combination of p-amino phenylnaphtyl-1.2-triazol-3.8-disulfonic acid and R salt. This document contains a detailed description which is only partly legible. In German.

PB L 28040. VILLIGER. Blue wool dye from amino naphthoquinone imine-7-sulfonic acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7632-7643 of FIAT Microfilm Reel 5 A). Jan 1906. 7 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Preparation of and testing results on the above products are described in detail. The structural formulas are faded and the main part of this document is written in an illegibly small hand writing. In German.

PB L 28041. JULIUS and BLANCEY. Process for the preparation of green to grey blue sulfur dyes. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7644-7650 of FIAT Microfilm Reel 5 A). Jan 1906. 4 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Verification of an old German patent application showed that the dyes obtained by this method do not prove to be worthwhile products. In German.

PB L 28042. JULIUS and FUSSENEGGER. Manchester Brown EE. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7651-7660 of FIAT Microfilm Reel 5 A). Feb 1906. 6 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Manchester Brown EE is produced by tetrazotising m-Tolylen diamine and by combining the resulting tetrazo compound with 2 mol. m-phenylendiamine or with m-tolylen diamine. A description of analysis is contained in this document. In German.

PB L 28043. LUTTRINGHAUS. Green sulfur dyes. (I.G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7661-7680 of FIAT Microfilm Reel 5 A). Feb 1906. 11 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The above dyes are developed from (1) p-amino-naphthyl-p'-hydroxy phenyl amine-sulfonic acid by reaction with polysulfides in the presence of metallic copper or copper salt (2) phenyl- or p-tolyl amino naphthyl-p'-hydroxy phenyl amine-sulfonic acid. Detailed methods of preparation are indicated. In German.

PB L 28044. JULIUS and BLANCEY. 2-diazo-1-hydroxy naphthalene-5-sulfonic acid and β-naphthol. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7681-7692 of FIAT Microfilm Reel 5 A). Mar 1906. 7 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
Two different methods of preparation of the above blue wool dye are described. This document contains an investigation concerning a protest against a German patent application number A 11147 IV/22a. In German.

PB L 28045. FUSSENEGGER. "Rhodamin ponceau G." (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7693-7703 of FIAT Microfilm Reel 5 A). Mar 1906. 6 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The above product contains about 75% of dextrin and about 25% of a dye which is the condensate of diethyl-o-amino-hydroxy-benzoylbenzoic acid with p-cresol. In German.

PB L 28046. FUSSENEGGER. "Echtheisenblau B." (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7704-7708 of FIAT Microfilm Reel 5 A) Mar 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
This mordant dye was found to be a combination of p-chloro-o-aminophenol and chromo-tropic acid. In German.

PB L 28047. LOHSE. Methylene azur. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7709-7721 of FIAT Microfilm Reel 5 A). Apr 1906. 7 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The preparation of the above dye from methylene blue by oxidation with bichromate and an acid is described. In German.

PB L 28048. JULIUS and FUSSENEGGER. "Brillantlackrot R." (I. G. Farbenindustrie. Journal of Central Laboratory

for Dyestuffs) (Frames 7722-7727 of FIAT Microfilm Reel 5 A) May 1906. 4 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Analysis showed that the above dye is a combination of aniline and 2,3-hydroxynaphthoic acid (melting point 217° C.). In German.

PB L 28049. JULIUS and FUSSENEGGER. "Pigment scharlach G" and "Heliopurpurin B." (I.G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs). (Frames 7728-7736 of FIAT Microfilm Reel 5 A). May 1906. 5 f. Price: Microfilm-$1.00 - Enlargement Print-$1.50
The first dye was identified as anthranilic acid combined with 2-naphthol-6-sulfonic acid, second as p-chloraniline and benzoyl-1-amino-8-naphthol-4,6 disulfonic acid. In German.

PB L 28050. LOHSE. Dealkylation of rhodamines by means of bichromate and sulfuric acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7737-7747 of FIAT Microfilm Reel 5 A) May 1906. 6 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The changes in the shades of rhodamine dyes by their dealkylation by means of potassium bichromate and sulfuric acid are investigated. This document is written in German script.

PB L 28051. FUSSENEGGER. Retesting of German patent application F 20388 IV/22a, Höchst, concerning an ortho-hydroxyazo dye. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7748-7750 of FIAT Microfilm Reel 5 A) May 1906. 2 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The preparation of a blue wool dye from diazotized o-aminophenol and chromotropic acid is discussed. If o-aminophenol is replaced by o-amino-p-cresol another blue dye of the same high quality is produced. In German.

PB L 28052. JULIUS and HOLDERMANN. Preparation of dimethylaminoanthraquinones from dimethylaminobenzoyl benzoic acid and from some derivatives thereof. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7751-7757 of FIAT Microfilm Reel 5 A) May 1906. 4 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Dimethylaminobenzoyl benzoic acid prepared after the Friedel-Crafts method was condensated to dimethylaminoanthraquinone with a moderate yield. Purification of the crude product lessened this yield considerably. Another method of condensation seemed more successful. Benzyl benzoic acid was condensated with sulfuric acid and the resulting anthranol was oxidized. However, it was confirmed that dimethylaminoanthraquinone was unsuitable for the production of dyes. In German.

PB L 28053. LOHSE. Dealkylation of rhodamines by means of permanganate or by pyrolusite and acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7758-7762 of FIAT Microfilm Reel 5 A) Jun 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Investigations were made on the influence of dealkylation of rhodamines, by means of permanganate or manganic oxide and acid or by means of bichromate and sulfuric acid, on the change of the shades of the color. This document is written in German script.

PB L 28054. LOHSE. Dealkylation of rhodamine by means of dichromate and sulfuric acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7763-7772 of FIAT Microfilm Reel 5 A) Jun 1906. 5 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The method of dealkylation of rhodamine by means of dichromate and sulfuric acid appearing of interest for commercial use was developed and the directions for this method are stated in detail in this document written in German script.

PB L 28055. JULIUS and BLANCEY. Retesting German patent application G 21434 IV/22 of Ciba Basel: Monoazo dyes from o-diazonaphthol sulfonic acids. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7773-7781 of FIAT Microfilm Reel 5 A) Jul 1906. 5 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The reactivity of o-diazonaphthol sulfonic acids is raised considerably if the combination with azo components takes place in presence of some organic neutral or basic compounds such as alcohols, pyridine, or aniline. In German.

PB L 28056. JULIUS and BRAREN. Black wool dyes from phenyl-1-naphthylamine 6-sulfonic acid and 7-sulfonic acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7782-7786 of FIAT Microfilm Reel 5 A) Jul 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The compounds mentioned in the title were prepared according to a patent of Elberfelder Farben of 1893. These naphthylamine sulfonic acids produce dyes when diazotized and coupled with diazotized aniline, metanilic acid, disulfanilic acid, 1-naphthylamine-3,6- or -3,7-disulfonic acid. The last one of these is an excellent wool dye but its costs of production seemed too high for practical use. In German.

PB L 28057. JULIUS and MULLER, RUDOLF. Azo dyes by application of toluene sulfo-1-amino-2-naphthol-6-sulfonic acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7787-7793 of FIAT Microfilm Reel 5 A) Jul 1906. 4 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
It was tried to build up azo dyes from a starting product obtained by reacting p-toluene sulfochloride with 1-amino-2-naphthol-6-sulfonic acid. This paper contains a detailed description of the preparation and comparison of the end products, which were not satisfactory. In German.

PB L 28058. JULIUS and BRAREN. Preparation of methylamine hydrochloride. (I. G. Farbenindustrie. Journal of the Central Laboratory for Dyestuffs) (Frames 7794-7795 of FIAT Microfilm Reel 5 A) Jul 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The directions are given for the preparation of methylamine hydrochloride from ammonium chloride and formaldehyde. In German.

PB L 28059. LOHSE. Prepration of nitro-p-phenilene diamine and of red-brown sulfur dyes. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7799-7812 of FIAT Microfilm Reel 5 A) Jul 1906. 7 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The directions are given for the nitration of the monoacetate of p-phenilene diamine which can replace the diacetate in this operation. Moreover, the directions are given for the condensation of dinitrochloro benzene with nitro-p-phenylene diamine. The preparation of a sulfur dye from this condensation product with sulfur and sodium sulfide is described. This document though typewritten is almost illegible. In German.

PB L 28060. JULIUS and SCHUBERT. Substituting 2,5-dihydroxynaphthalene-7-sulfonic acid for the I-acid in various dyes. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7813-7817 of FIAT Microfilm Reel 5 A) Aug 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
It was investigated to what extent the properties of certain diazo dyes derived from amino naphthol sulfonic acid I were modified, when the corresponding 2,5-dihydroxy-naphthalene-7-sulfonic acid was used in the place of I-acid. The combination with dihydroxy naphthalene sulfonic acid proved equivalent to the corresponding I-acid dyes. In German.

PB L 28061. JULIUS and others. Effect of sulfurous acid on zinc dust and formaldehyde in the presence of alco-

(I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7818-7825 of FIAT Microfilm Reel 5 A) Aug 1906. 5 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The reaction referred to in the title takes the same course in the presence of alcohol as in its absence; the difference being merely the necessity of lowering the temperature at which the reaction takes place so that the formation of formaldehyde hydrosulfite may be observed. Tables and a graph are included. In German.

PB L 28062. JULIUS and VILLIGER. I. Rhodol from the intermediate phthalic acid diethyl-m-amino phenol and pyrogallol. II. Rhodol from the intermediate, phthalic acid diethyl-m-aminophenol and gallic acid. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7826-7830 of FIAT Microfilm Reel 5 A) Aug 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Preparation of these two substances and the calculation of the production cost are presented. In German.

PB L 28063. LOHSE. "Rosa 82846." (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7831-7835 of FIAT Microfilm Reel 5 A) Sep 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Chemical analysis of "Rosa 82846" showed this dye to be a pure, completely esterized asymmetric dialkyl rhodamine. In German.

PB L 28064. VILLIGER. Retesting of German patent application F 20925 IV/22e, Höchst. Process for the preparation of dyes (dyeing on a mordant) of the indigo series. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7836-7840 of FIAT Microfilm Reel 5 A) Sep 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Dyes of the indigo series capable of dyeing on a mordant are prepared by reacting indoxyl or allied substances with hydroxy quinone in alkaline solution. The resulting leuko substances are oxidized. This process was re-examined and confirmed. In German.

PB L 28065. VILLIGER. Determination of phenylglycine. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7841-7857 of FIAT Microfilm Reel 5 A) Sep 1906. 9 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Phenylglycine is converted into its acetyl derivative and the acetic anhydride necessary for this reaction is measured by titration. Other quantitative methods are mentioned and compared to the one above. Detailed descriptions and tables are given in this document. In German.

PB L 28066. VILLIGER and BLANCEY. Experiments concerning the coupling-velocity of the zinc and sodium salt of 1-diazo-2-naphthol-4-sulfonic acid with beta-naphthol. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7858-7861 of FIAT Microfilm Reel 5 A) Oct 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Experiments concerning the influence on the rate of the coupling reaction of the zinc and sodium salts of the above compound with beta-naphthol resulted in the finding that: (1) The zinc salt accelerates the rate of the coupling reaction more than pure sodium salt; (2) the sodium salt of the above compound in combination with sodium chloride accelerates the coupling reaction even more than the pure zinc salt. This document contains tables in addition to a detailed description. In German.

PB L 28067. BRAREN and JULIUS. Investigations on blue substantive dyes from p-phenylene diamine. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7862-7879 of FIAT Microfilm Reel 5 A) Oct 1906. 10 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Investigations on blue substantive dyes from p-phenylene diamine had been done in a great number of German patents. Yet combinations of 2-amino-5-naphthol-7-sulfonic acid (J-acid or phenyl J-acid) with a m-diamine had not been tried. They are the object of this document written in German script. The results did not produce any dye suitable for practical use.

PB L 28068. BRAREN. Color lacquers containing acetyl-m-phenylene diamine in central position. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7880-7883 of FIAT Microfilm Reel 5 A) Oct 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Production of dyes from the above starting material was investigated and compared to Lithol bordeaux (B and R). However, they did not show any improvements and the costs of production were rather high. In German.

PB L 28069. JULIUS and HOLDERMANN. Experiments in the styrogallol series. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7884-7886 of FIAT Microfilm Reel 5 A) Oct 1906. 2 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
In the course of experiments trying to subject compounds analogous to p-aminoanthraquinone to melting with potassium hydroxide in order to produce vat dyes similar to indanthrene, derivatives of styrogallol were obtained. Styrogallol, obtained by condensation of cinnamic acid with gallic acid is a dihydroxyanthracumarin. Several compounds of a structure similar to styrogallol were investigated as to their dye forming qualities. Some azo dyes were produced from it with m- and p-cinnamic acid showing intense coloring. Nitrated styrogallol produced an effective mordant dye. In German.

PB L 28070. JULIUS and HELDERMANN. Acridone research. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7887-7892 of FIAT Microfilm Reel 5 A) Oct 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The goal was to obtain indanthrene-like vat dyes, and possibly also azo dyes. The processes used are described. They did not, however, lead to any useful dye. In German.

PB L 28071. FUSSENEGGER. "Chromoglaucin VM", Höchst. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7893-7898 of FIAT Microfilm Reel 5 A) Nov 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The dye was analyzed and found to be very similar to "Gallamin blue" Geigy. A complete analysis was not made. In German.

PB L 28072. FUSSENEGGER. "Lake red D" and "normal yellow 3 GL," Höchst. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7899-7903 of FIAT Microfilm Reel 5 A) Nov 1905. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
The first-named substance proved to be a combination of anthranilic acid and beta-naphthol, the second a combination of m-xylidine-o-sulfonic acid and 1-p-sulfophenyl-5-pyrazolone-3-carbonic acid. In German.

PB L 28073. BEYER. p-Phenylene diamine-monoazo-1,8-dihydroxynaphthalene-3,6-disulfonic acid. (Victoria violet 4 BS, Höchst.) (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7904-7912 of FIAT Microfilm Reel 5 A) Nov 1906. 5 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Instructions for the preparation of this dye are given, also a cost calculation. In German.

PB L 28074. VILLIGER. "Hydrosulfite NLB" Höchst. (I. G. Farbenindustrie. Journal of Central Laboratory for

Dyes (contd)

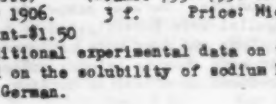
Dyestuffs) (Frames 7913-7927 of FIAT Microfilm Reel 5 A) Nov 1906. 8 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Crystal water was removed from crystallized $Na_2S_2O_4 \cdot 2H_2O$ (a) by heating in vacuum, (b) by heating starting at normal pressure and reducing the pressure gradually. It was investigated whether the method used had any influence on the resistance of the product to oxygen. Also investigated were the water retaining power and other properties of the crystallized substance. Results are given in tables. In German.

PB L 28075. JULIUS and FUSSENEGGER. "Naphthylamin-schwars" 4 BN and BN, Elberfeld, and "Aminschwars" 4 B, 6 B, and S 4 B, Berlin. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7943-7953 of FIAT Microfilm Reel 5 A) Nov 1906. 6 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Analyses of the above products showed that the "Aminschwars" brands contained 2-naphthylamine-4,6-disulfuric acid-azo-α-naphthylamine-azodimethyl-aniline, whereas the Elberfeld products contained p-nitro-o-aminophenol and 1-naphthol-5-sulfonic acid. In German.

PB L 28076. VILLIGER. Hydrosulfite NLB (Höchst). A supplement to the report dated Nov. 23, 1906. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7954-7956 of FIAT Microfilm Reel 5 A) Nov 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Additional experimental data on the loss of crystal water and on the solubility of sodium hydrosulfite are presented. In German.

PB L 28077. RÜDIGER. "Schwefelviolett." (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7964-7968 of FIAT Microfilm Reel 5 A) Dec 1906. 3 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Directions are given for producing phenyl-m-toluene diamine which is used as starting material in the preparation of the above dye. In German.

PB L 28078. LÜTTRINGHAUS. A green sulfur dye. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7969-7975 of FIAT Microfilm Reel 5 A) Dec 1906. 4 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
In the preparation of the above dye from

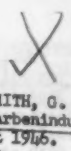


ethyl-α-naphthyl-amine sulfonic acid was used. In German.

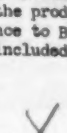
PB L 28079. LOHSE. Pure, asymmetrical dimethyl-homorhodamine ethyl ester. (I. G. Farbenindustrie. Journal of Central Laboratory for Dyestuffs) (Frames 7976-7982 of FIAT Microfilm Reel 5 A) Dec 1906. 4 f. Price: Microfilm-$1.00 - Enlargement print-$1.50
Experiments for the preparation of "Rosa 82646" consisting of the above compound are described. In German.

Detergents

* PB L 81619. BRANDNER, JOHN D. and others. Synthetic detergents and related surface active agents in Germany. (FIAT Final Rept 1141) n. d. 120 p. Price: Mimeo-$3.00
The report gives the comparative evaluation of synthetic detergents as produced and tested in Germany. Research work carried out in the principal German industrial laboratories on surface active agents immediately before and during the war is described. In several instances this work led to pilot plant installations which are also covered. A number of plant processes for products being manufactured are included. A list of all the synthetic detergents and related products made in Germany has been compiled and arranged alphabetically by trade name. The composition and reference to the source of information is given. Lists of documents, and drawings and bibliography are attached.



*PB L 79310. CALDWELL, J. M. and SMITH, G. H. Mersol and Hostapon processes. I. G. Farbenindustrie, Höchst. (BIOS Final Rept 1222, Item 30). Oct 1946. 15 p. Price: Microfilm-$1.00 - Photostat-$1.00
The information in this report supplements that contained in a fuller report entitled, "Textile auxiliary products. Development of Mersol and Hostapan processes by I. G. Farbenindustrie, Hoechst", BIOS Final Report 478, PB 31278, abstracted in v. 2, p. 942, of this Bibliography. The present report is based upon a visit to I. G. Hoechst on October 9, 1946 and is concerned chiefly with the production of Mersolat and Hostapon with particular reference to BIOS 478. A photograph and several flowdiagrams are included.



* PB L 81383. HOLM, M. M. and others. The Oxo process. (FIAT Final Rept 1000) Feb 1947. 78 p. Price: Mimeo-$2.00
The Oxo process is a wartime development of the German firm of Ruhrchemie A. G. and I. G. Farbenindustrie A. G. It involves the addition of carbon monoxide and hydrogen to olefins to yield aldehydes and alcohols and is generally applicable with very few exceptions to all double bonds. The present report summarizes all phases of this development. It describes the various modifications of the process, as proposed by the various German workers in the field and furthermore includes information on those more or less new developments connected directly with the Oxo process or specific for Oxo products. A general description of the state of the art in Germany is presented and information required by the reader for his own evaluation is included. Since the report refers repeatedly to documents published in Technical Oil Mission (TOM) films a complete bibliography of these microfilms has been included. Also, various flow sheets, drawings, diagrams, sketches on wetting and foaming properties and on detergency of Oxo alcohol sulfate are attached.

* PB L 81819-S. U. S. FIELD INFORMATION AGENCY, TECHNICAL. The P3 cleaners - Henkel & Cie., Düsseldorf. (Tech Bulletin T-46, Supp.) May 1947. 6 p. Price: Mimeo-$3
These products are primarily mixtures of alkali and alkaline salts with or without the addition of wetting agents or disinfectants. They are used for a wide range of cleaning in industry and in food processing. The P3 cleaners are briefly mentioned in BIOS Final Rept. No. 711 (PB 45243, v. 5, p. 283) and in BIOS Final Rept. No. 86 (PB 18911, v. 1, p. 117). These cleaners are all dry powders with one exception. The preparation is carried out in conventional type mixers. When part of the ingredients are used in solutions, the water is taken up as water of crystallization by the anhydrous salts. Description of the P3 cleaners and preparation of ingredients are given.

Agricultural Chemicals

PB L 78639. CROSS, H. F. and SNYDER, F. M. Field tests of uniforms impregnated with mite toxicants. I. Pre-

jection studies. II. Stopping-time studies. n. d. 17 p. Price: Microfilm-$1.00 - Photostat-$2.00
In a search for chemicals more resistant to washing than benzyl benzoate, more than 6000 materials were subjected to screening tests at the Orlando, Fla., laboratory. In part I data obtained during the summer of 1946 are presented on the effectiveness of 18 outstanding materials compared with benzyl benzoate. Benzil, 2-thenyl benzoate, p-cresyl benzoate, diphenyl carbonate, and 2-thenyl salicylate were found to be especially promising for uniform impregnations. Part II discusses the relation between stopping time and protection. It was concluded from these data that some correlation exists between stopping time and protection but no definite limit of time can be set for all materials on the basis of these tests. If stopping times are 15 minutes or less, protection of 90% or more may be expected, but when stopping times are greater than 15 minutes, protection ranging from 0 to 100% may be expected. Tables and bibliography are included.

PB L 13091. I. G. FARBENINDUSTRIE A. G. T. E. A. Buro
Report primarily concerned with nitrogen chemistry, 1933-1938. (FIAT Microfilm Reel C 50, Frames 1-485). Jan 1946.
499 f. Price: Microfilm-$5.00 - Enlargement print-$50.00
The individual items on this reel are listed below. They will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $5.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

PB Numbers Frames	Title	Price
L 50627 Frames 1-10	Solid carbon dioxide. In German.	$1.00
L 50628 Frames 11-13	Results of the examination of the methods of improving nitrophoska. In German.	1.00
L 48283 Frames 14-18	The production of hydrogen for welding purposes by cracking ammonia. In German.	1.00
L 50629 Frames 19-22	Alkacide process. In German.	1.00
L 50630 Frames 23-44	Humus and carbonaceous fertilizer. Iron carbonyl and nickel carbonyl. In German.	2.00
L 50635 Frames 45-48	Increase of briquet production by the "Mitteldeutsche Braunkohlenwerke" of the I. G. In German.	1.00
L 50634 Frames 49-51	Production program. In German.	1.00
L 50633 Frames 52-55	Fluctuations of the content of "mixed fertilizers" and their consequences for producer and consumer. In German.	1.00
L 50632 Frames 56-60	Pearl calcium cyanamide and granulated calcium cyanamide "Knapsack." Production process and quality of products. Production costs. In German.	1.00
L 50631 Frames 61-72	Scientific investigations into the decomposition process in "Nitrophoska" fertilizers. In German.	1.00
L 50636 Frames 73-78	Agricultural questions: The value of cyanamide for agriculture. In German.	1.00
L 50637 Frames 79-88	Reorganization of the advisory boards and experimental institutions in the fertilizer industry. In German.	1.00
L 50638 Frames 89-111	Experiments for the preparation of humus fertilizer. Chemical technical part. Agricultural part. In German. (These frames may reproduce poorly).	2.00
L 50639 Frames 112-118	The sulfur balance at Leuna. In German.	1.00
L 50640 Frames 119-120	Decomposition of wood with nitric acid. In German.	1.00
L 50641 Frames 121-131	Cyanamide, especially granular cyanamide. In German.	1.00
L 50642 Frames 132-133	Report on the first nitrogen meeting in Ludwigshafen on Jan 10, 1935. In German.	1.00
L 50643 Frames 134-140	Sales and market of nitrogen fertilizer in Germany and abroad. In German.	1.00
L 50644 Frames 141-143	Sales of commercial nitrogen products. In German.	1.00
L 50645 Frame 144	Report of the bookkeeping center on the third quarter and preliminary report on the entire year of 1934. In German.	1.00
L 50646 Frames 145-149	Credit requests reported to TEA. In German.	1.00
L 50647 Frames 150-151	Purchase of real estate in Halle a. S. In German.	1.00
L 50648 Frames 152-153	Report on agreements to be concluded. In German.	1.00
L 50649 Frames 154-157	Catalytic production of hydrocyanic acid from ammonia, methane and air. In German.	1.00
L 50650 Frames 158-164	Ways to supply the German agriculture with fodder protein. In German.	1.00
L 50651 Frames 165-171	Response to Dr. Bachmann's report on "The importance of calcium cyanamide for agriculture." In German.	1.00
L 50652 Frames 172-173	Report on the third nitrogen meeting in Ludwigshafen on June 18, 1935. In German.	1.00
L 50653 Frames 174-179	Sales and market situation of nitrogen fertilizer. In German.	1.00
L 50654 Frames 179A-180	Negotiations for the renewal of the contacts with CIA and Chile. In German.	1.00
L 50655 Frames 181-184	New nitrogen projects abroad (Spain, Finland, Egypt, Japan). In German.	1.00
L 50656 Frame 185	Central bookkeeping's report on the year 1934 and the first quarter of 1935. In German.	1.00
L 50657 Frames 186-188	Construction of a power station for highest pressure and counter-pressure and a low	

temperature carbonization plant for briquets at the mine Naumburg near Deuben. In German. 1.00

L 50558 Frames 189-197 — Credit requests reported to "TEA". In German. 1.00

L 50559 Frames 198-205 — Reports on agreements to be concluded. In German. 1.00

L 50560 Frames 206-210 — Factory problems: Production program. In German. 1.00

L 50561 Frames 211-213 — Review of experimental work of the "Hauptgruppe I" (without carbon hydrogenation). Preliminary concentration of nitric acid. In German. 1.00

L 50562 Frames 214-218 — Production of "Nitrophoska" and calcium cyanamide-phosphate mixture in Piesteritz. In German. 1.00

L 50563 Frames 219-220 — Report on the fourth nitrogen meeting in Ludwigshafen on Oct 25, 1935. In German. 1.00

L 50564 Frames 221-235 — Report on East Asia with special regard to China and the nitrogen discussions in China. In German. (Frame 228 poorly legible). 1.00

L 50565 Frames 236-237 — Granting of patent licenses and informing foreign countries about own experiences. In German. 1.00

L 50566 Frames 238-243 — Sales and market situation of fertilizer nitrogen at home and abroad. In German. 1.00

L 50567 Frames 244-245 — Sales and market situation for commercial nitrogen. In German. 1.00

L 50568 Frames 246-263 — The new international agreements regarding nitrogen. In German. 2.00

L 50569 Frame 264 — Survey on research of the main group I (with the exception of hydrogenation of coal) (continuation). In German. 1.00

L 50570 Frames 265-267 — Development of the financial situation of branch I, with special regard to the expenditures for new buildings, repairs, etc. In German. 1.00

L 50571 Frame 268-273 — Requests for credit. In German. 1.00

L 50572 Frames 274-275 — Expansion of the experimental plant for "Lanusa." In German. 1.00

L 50573 Frame 276 — Report of the central bookkeeping on the second quarter of 1935. In German. 1.00

L 50574 Frames 277-278 — Problems of manufacture. In German. 1.00

L 50575 Frames 279-280 — Report on the fifth nitrogen meeting in Ludwigshafen on Dec 5, 1935. In German. 1.00

L 50576 Frames 281-282 — Sales and market situation of fertilizer nitrogen at home and abroad. In German. 1.00

L 50577 Frames 283-289 — Credit proposal "TEA." In German. 1.00

L 50578 Frames 290-295 — Report on contracts to be concluded. Contract with Yahagi Hiryo K. K. for the construction of an ammonia plant. In German. 1.00

L 50579 Frames 296-297 — The economic situation of the German calcium cyanamide industry. In German. 1.00

L 50580 Frames 298-314 — The development of fertilizing with nitrogen in Germany with special regard to the relationship of the effects of various nitrogen compounds on the fertilization of plants. In German. 2.00

L 50581 Frames 315-328 — Reformatory efforts towards a new way of life and their effect on fertilization. In German. (This document may not reproduce well in parts). 1.00

L 50582 Frames 329-330 — First nitrogen meeting in Ludwigshafen on Feb 20, 1936. In German. 1.00

L 50583 Frames 331-337 — Sales and market situation for fertilizer nitrogen. In German. 1.00

L 50584 Frames 338-342 — Sales and market situation for commercial nitrogen. In German. 1.00

L 50585 Frames 343-345 — Acquisition of coal fields. In German. 1.00

L 50586 Frames 346-357 — 120 atm. installation for the Leuna plant. In German. 1.00

L 50587 Frames 358-368 — Boiler damages at Oppau. In German. 1.00

L 50588 Frames 369-371 — Report on situations abroad. In German. 1.00

L 50589 Frames 372-380 — Credit requests reported to "TEA." In German. 1.00

L 50590 Frames 381-382 — Report on agreements to be concluded. In German. 1.00

L 50591 Frames 383-384 — Nitrogen meeting at Leuna on December 22, 1937. In German. 1.00

L 50592 Frames 385-388 — Sales and market situation for commercial nitrogen. In German. 1.00

L 50593 Frames 389-393 — Sales and market situation for fertilizer nitrogen. In German. 1.00

L 50594 Frames 394-420 — The agricultural situation by the end of 1937 and the prospects for the sale of nitrogen. In German. 2.00

L 50595 Frames 421-436 — Situation of the projects for foreign countries. In German. 2.00

L 50596 Frames 437-438 — Production program and actual productions. In German. 1.00

Agricultural Chemicals (contd

L 50597 Frames 439-440 — Nitrogen meeting in Ludwigshafen on Mar 25, 1938. In German. 1.00

L 50598 Frames 441-453 — Sales and market situation for fertilizer nitrogen at home and abroad. In German. 1.00 (Frames 441 to 451 are illegible).

L 50599 Frames 454-456 — Negotiations on extension of the international nitrogen contracts. In German. 1.00 (Frame 456 is illegible).

L 50600 Frames 457-459 — Sales and market situation for commercial nitrogen. In German. 1.00 (Frame 458 is illegible).

L 50601 Frames 460-470 — Production program. In German. 1.00 (May reproduce poorly in parts).

L 50602 Frames 471-475 — New projects of the lignite mines. In German. 1.00

L 50603 Frame 476 — Experimental research of the ammonia laboratory in the years 1936 and 1937. In German. 1.00

L 50604 Frames 477-485 — Projects abroad. In German. 1.00

L 50628 — T. E. A. Büro-Reports primarily concerned with nitrogen chemistry. (Index). 1.00

PB L 80824. KROP, STEPHEN. HETP. 1947. 2 p.
Price: Microfilm-$1.00 - Photostat-$1.00
Concerns the toxicity and treatment of hexaethyltetraphosphate (HETP) poisoning.

* PB L 81386. MULLER, MAX M. and LEE, HARLEY C. Manufacture of phosphatic fertilizer by the Rhenania process. (FIAT Final Rept 1188) Jun 1947. 7 p. Price: Mimeo-25¢
A study of the operating technique and the developments made by Kali-Chemie A. G. in the production of "Rhenania" phosphate at their Brunsbüttelkoog plant. This is one of the few companies that has made a satisfactory phosphatic fertilizer on a commercial scale by calcining rock phosphate with sodium salts and silica. The important phases of the process are the proportioning of the chemical constituents in the raw mix and the control of a rather difficult rotary kiln operation. Detailed information regarding the process and the plant has been given in the following reports: BIOS Final Rept. 94 (PB 18913, v. 1, p. 1295, this Bibliography), BIOS Final Rept. 582 (PB 34741, v. 2, p. 937), and FIAT Rept 665 (PB 18777, v. 1, p. 1217). This report purposes to supplement the information already available and is not intended to be complete in itself.

* PB L 81635. TANNER, C. C. and others. Manufacture, formulation and application of the major pest control products in the British, U. S. and French zones of Germany. (BIOS Final Rept 1480, Item 22) Sep-Nov 1946. 94 p.
Price: Microfilm-$3.25 - Photostat-$10.00
The information recorded was obtained for the most part by direct interrogation of plant managers, chemists, foremen and workers and by as detailed an examination of plants as was possible in the course of relatively short visits. Some of the facts recorded may well be regarded as elementary by readers who may be specialists in particular branches of pest control industry. However, it was considered desirable to describe in detail the processes as operated in order to record manufacturing techniques which might possess points of interest and novelty not recognized as such by the team.

Plastics and Plasticizers

* PB L 81626. BRIGHTON, C. A. Manufacture of polyvinylidene chloride. (BIOS Final Rept 1478, Item 22) Mar 1947. 22 p. Price: Microfilm-$1.50 - Photostat-$3.00
Discussions were held with the technical men of I. G. Farbenindustrie at Ludwigshafen and Huels. At Huels, some information was obtained on the manufacture of the monomer but the work on the polymerization was only in the preliminary stages and very little useful information was available. At Ludwigshafen, the production of a copolymer (Diurit) containing 85% vinylidene chloride, 13% vinyl chloride, and 2% acrylonitrile had reached plant scale and the product was used extensively for the manufacture of bristles. The manufacture of an elaborately purified grade by polymer is described in detail. A copolymer containing 92.5% vinylidene chloride and 7.5% ethyl acrylate has been developed for the production of fine thread by spinning from a 25% solution in tetrahydrofuran and this was manufactured by the same process as for Diurit. Some details are also given of laboratory experiments on the effect of oxygen on vinylidene chloride and on the resulting polymer. Copolymers have been produced on a small scale with all available vinyl compounds, but for general extrusion, Diurit has proved to be most satisfactory.

* PB L 81618. BRIGHTON, C. A. and others. Polyurethanes. Interrogation of Dr. Otto Bayer (I. G. Farbenindustrie, Leverkusen). (BIOS Final Rept 1497, Item 22; Interrogation Rept 542) Jul 1946. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
The questions submitted at this interrogation were intended to supplement the information given in the two published reports of lectures given by Dr. Bayer in 1941 before the Technische Ausschuss der I. G. Farbenindustrie (see CIOS Rept. No. XXIX-12; PB 1812, v. 1, p. 104). Information given by Dr. Bayer in this interview was on the following: starting materials, preparation and properties of polyureas, linear polyurethanes, reaction of isocyanates with cellulose, processing of igamid U, polyurethane lacquers, polyurethane-linseed oil, desmophen-desmodur varnishes, foam masses, cementing of buna, and leather processing.

* PB L 81276. DUNLOP, R. D. Manufacture of phenol formaldehyde resins and molding powders. (FIAT Final Rept 1077) Apr 1947. 75 p. Price: Mimeo-$2.00
This report should not be considered complete in itself; the phenolic resin industry is too complex to allow that, nor was it possible to visit all producers, as a comparison of appendix 2, and appendix 4 will show. Nevertheless, it is considered that the detail presented is sufficient to support the general conclusions presented. The report consists of three parts: Part I, Summary - an attempt is made to summarize the practices in this complex industry; Part II, Detailed description of processes - here, as factually as possible, the information regarding the practices of the various producers is recorded; Part III, Appendices and drawings - pressure conditions less than one atmosphere are given in millimeters of mercury. Numbers in parenthesis in text refer to bibliography. A series of drawings is attached to the report.

PB L 80816. WADE, WORTH. Dryer used on urea molding materials. Memorandum report. May 1947. 6 p.
Price: Microfilm-$1.00 - Photostat-$1.00
This report describes and illustrates by the use of four photographs the drying of a wet mass of urea formaldehyde impregnated pulp fibers by use of a Mittner "Turbo Dryer."

Inorganic Chemicals

* PB L 80384. KELLER, J. L. Production of inorganic phosphate salts at Bayerische Stickstoffwerke A.G., Pi-

esteritz, Germany. (FIAT Final Rept 1194). Jun 1947. 8 p. Price: Xerox-$0.25

This plant produced five inorganic phosphate salts by neutralization of the phosphoric acid made in the plant with sodium hydroxide. The production of four of these, sodium acid pyrophosphate, sodium neutral pyrophosphate, disodium phosphate crystals, and trisodium phosphate crystals offered no new or unusual features. The production of the fifth, sodium hexametaphosphate, although it was only in the pilot plant stage, presented a number of interesting details which are described.

* PB L 79444. LAWRENCE, J. and others. Henkel, Düsseldorf. Sodium perborate and sodium percarbonate. (BIOS Final Rept 1367, Item 22). Feb 1946. 43 p. Price: Microfilm-$1.00 - Photostat-$3.00

Two processes were in use at this plant for the production of sodium perborate. The electrolytic process consited in electrolyzing an alkaline solution of sodium borate and separating the precipitated sodium perborate. Drawings illustrate the cell, electrode assembly, and TV drier. A flowdiagram is also presented. Production was 2500 - 3000 tons per year, borax efficiency, 98-99%. The chemical process depended on the reaction of hydrogen peroxide and borax in alkaline solution solution and the separation of the precipitated sodium perborate. Production was 2500 - 3000 tons per year, borax efficiency, 97%. Sodium percarbonate was made by the reaction of hydrogen peroxide with soda ash and salting out the resultant percarbonate. Capacity was 180 tons per month, the efficiency based on hydrogen peroxide, 88.5%. The report describes plant and process in all three manufactures. Also given are raw material and labor requirements, costs, efficiencies, and analyses.

* PB L 81278. HILL, FREDERICK and LARGENT, RAYMOND. Soda ash manufacture in southern and western Germany. (FIAT Final Rept 1074) Apr 1947. 51 p. Price: Xerox-$1.50

A survey of the German soda ash industry supplementing previous reports on the subject, with emphasis on operating practices, plant capacities, and technical performances; contains drawings of typical equipment, operating and manufacturing cost data. Four of the six plants visited were producing at rates well below capacity. The German plants are relatively old and show little evidence of recent intensive research. Product quality is somewhat inferior to American standards. Additional information on waste heat recovery, filtration and feeding driers is included.

* PB L 79443. TONGUE, R. G. Sodium bichromate production. (BIOS Final Rept 1393, Item 22). n. d. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00

The plant and processes for the manufacture of sodium bichromate were examined at I. G. Farbenindustrie, Uerdingen, where Dr. Dilthay was questioned. This plant used the carbon dioxide method of converting chromate to bichromate. The production of crystals was 33 tons a day maximum. In practice, only part of the sodium bichromate was converted to crystals, the rest being used to make potassium bichromate and other products. Table 1 gives operating data for a typical day's production. Diagram 1 is a flowdiagram. The firm of Zahn and Co., Chemical Engineers, Berlin, was visited and certain drawings of plant for the production of sodium bichromate examined. The sulfuric acid method for the conversion of chromate to bichromate was used. The present report discusses certain plant drawings which have been removed from both Zahn and Co. and I. G. Uerdingen, but these have not been included in the report.

* PB L 81093. WOOD, W. S. Hydrogen peroxide: Summary of investigations carried out at Leverkusen on synthetic methods I. G. Farbenindustrie. (BIOS Final Rept 1414, Item 22) Jun 1947. 32 p. Price: Microfilm-$1.00 - Photostat-$3.00

The three methods investigated and covered in this report were: (a) silent electric discharge, (b) cathodic reduction of oxygen, and (c) thermal process, by burning hydrogen and passing the products of combustion through a water spray.

PB L 63778-S. ANORGANA G.M.B.H., GENDORF, GERMANY. Acetylene generation, dry method, flow sheets and drawings. (Supp to FIAT Final Rept 969, PB 63778) (FIAT MG 5438, c. d. n. o. p) 1942-1946. 73 p. Price: Microfilm-$2.00 - Photostat-$5.00

These drawings are a supplement to a report on "Acetylene generation, dry method" by Kammermeyer and Carpenter (see Bibliography, v. 5, p. 663, PB 63778).

* PB L 80408. BOWEN, C. E. The electro-chemical industry. (BIOS Final Rept 1301, Item 22). Jul 1946. 59 p. Price: Microfilm-$2.00 - Photostat-$4.00

A description of alkali-chlorine plants of: (A) I. G. Farbenindustrie, 1. Gendorf, 2. Ludwigshafen, 3. Leverkusen; (B) Alexander Wacker G.M.B.H., Burghausen; (C) Feldmuehle A. G., Lulsdorf, Cologne; (D) Chemische Werke, Huls and the water electrolysis plants of I. G. Farbenindustrie, Gendorf; Siemens-Halske, Erlangen, Nuremberg; F. Korver. Hydraulic G.M.B.H., Duisberg, and Druckmersetzer G.M.B.H., Wanne Eikal. Photographs and drawings appear throughout the report. List of drawings with references is attached.

PB L 80858. COMINGS, E. W. and others. I. High velocity vaporizers. n. d. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00

A method of vaporizing relatively high boiling or thermally unstable liquids into a hot gas stream is described. The liquid under low pressure is introduced as a simple jet into a high velocity hot gas stream. The liquid is thus atomized to drops less than 100 μ in diameter and very high rates of heat transfer to the liquid and vaporization of the liquid are obtained. A venturi tube is a useful design for obtaining the high velocity. The hot gas is cooled rapidly and the time exposure of the liquid to a high temperature is very short, of the order of a few milliseconds. University of Illinois.

* PB L 81092. HULLAND, H. L. and others. Hydrogen peroxide plant at Bad Lauterberg. Interrogation of Dr. W. Piening. (BIOS Final Rept 1381, Item 22; Interrogation Rept 496) Nov 1946. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

This is a report resulting from an interrogation of Dr. Piening who is a chemical engineer. The report is in two parts. Part I - a discussion centered on the points upon CIOS Report XXIII-18 and Part II - 30-35% hydrogen peroxide based upon CIOS Report XXIII-18.

PB L 80859. LEWIS, H. C. and others. II. The atomization of liquids in high velocity gas streams. n. d. 41 p. Price: Microfilm-$1.00 - Photostat-$3.00

Attention is called to the general usefulness, for purposes of design and control of gas-atomizating and liquid spray nozzles, of the empirical equations published by Nukiyama and Tanasawa. The mathematics of the equations is discussed, and it is shown that drop size distribution data can be expressed in terms of a simple straight line relationship. In the case of liquid spray nozzles, the agreement of the equations is more qualitative. In the case of gas-atomizing nozzles analysis of the data in the literature reveals substantial agreement with the equations. Experiments on gas-atomizing nozzles are described. These corroborate and extend the work of Nukiyama and Tanasawa and give an indication of the effects of gas density, gas viscosity, heat transfer from gas to liquid, and the scale of the apparatus on the performance of gas-atomizing nozzles. Tables and graphs are attached. University of Illinois.

PB L 77802. RIEDHAMMER, L. Description of tunnel furnaces. (With drawings). (FIAT Repts M 117 - M 119, Incl.). Feb, Jun 1941-Dec 1946. 14 p. Price: Microfilm-$1.00 - Photostat-$1.00

The construction, operation and performance of gas operated tunnel furnaces are described. A specified list of furnaces

installed by the above company is given. The report dates from 1941. Two tables with colored drawings are attached. In German.

Miscellaneous Chemicals

*PB L 47773-S. PHOMHOLZ, STANLEY A. Urea manufacture at the I. G. Farbenindustrie plant, Oppau. (Supplement to PB 47773). (FIAT Final Rept 889, Supp). n. d. 5 p. Mimeo-25¢.
This document is a supplement to the report by Dewling and Robell (see Bibliography vol 3, p 704). It furnishes additional information on 17 questions which were raised in the study of the earlier report.

* PB L 81826. FULLER, D. L. and others. Manufacture and purification of arc acetylene. (FIAT Final Rept 921) Jun 1947. 134 p. Price: Mimeo-$3.50
Hydrocarbon gases are partially converted to acetylene in an electric arc. The crude product gas is first purified by cyclone separators, bag filters, by oil, and finally by water scrubbing. The acetylenes present are then concentrated by solution in water under pressure. The higher acetylenes in this concentrate are then separated from acetylene itself by cooling in stages to -78° C. and the acetylene free gas is separated into its components in a Linde plant. Bibliography, tables and flow sheets appear in the appendices.

* PB L 81539. HILL, A. and HALE, D. K. Manufacture and applications of polyvinyl alcohol. (BIOS Final Rept 1418, Item 22) Oct-Nov 1945. 38 p. Price: Microfilm-$1.75 - Photostat-$4.00
During the investigation it was decided to start at the manufacture of the polyvinyl acetates from which the various polyvinyl alcohols are made. The manufacture of vinyl acetate monomer had previously been investigated on a number of occasions, see, for example, FIAT Final Rept. No. 860 (PB 44673, v. 4, p. 571, this Bibliography) and BIOS Final Rept. No. 745 (PB 52878, v. 5, p. 666). No investigation was made of the manufacture and applications of other vinyl acetate polymers, e. g. polyvinyl acetate dispersions. Thus, while the manufacture of certain polyvinyl acetates is described, it should be understood that such description is not by any means exhaustive and is only incidental to the manufacture of polyvinyl alcohols. The information obtained is presented under three main headings: (a) manufacture at Hoechst, (b) manufacture at Burghausen, and (c) applications. At Hoechst the polyvinyl alcohols were known by the trade name "Vinarol" and the acetates as "Mowilith" while at Burghausen the alcohols were called "Polyviol" and the acetates "Vinnapas." Diagrams and photographs are attached.

PB L 74709. I. G. FARBENINDUSTRIE A. G., LUDWIGSHAFEN, GERMANY. Laboratory reports and operating instructions. (FIAT Microfilm Reel M 142, Frames 1247-1846) 1931-1946. 402 f. Price: Microfilm-$6.00 - Enlargement print-$40.50
This FIAT microfilm reel consists of 47 items in the field of organic chemistry. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
1247-1256 PB L 74709	Simultaneous determination of formic acid, acetic acid, propionic acid, and butyric acid in aqueous solutions. By Leithe. 1943. In German.	$1.50
1257-1261 PB L 74709	Oxidimetric determination of oxygen in gases. By Leithe. 1943. In German.	1.50
1262-1268 PB L 74709	A new method of determining diglycol in triglycol. 1943. In German.	1.50
1269 PB L 74709	Determination of the calcium oxide content of sodium chloride solutions. In German.	1.50
1270-1297 PB L 74709	Review of the methods for determining olefin. By Eckhardt. 1943. In German.	3.00
1298-1301 PB L 74709	Analysis of technical chrome zinc products. 1944. In German.	1.50
1302-1303 PB L 74709	Application of hydroxyquinoline in analytical chemistry. 1944. In German.	1.50
1304-1306 PB L 74709	Report on the verification of a rapid quantitative analytical method developed by Dr. Zabel, Textile Dyeing at Wolfen. By Vogel. 1944. In German.	1.50
1307-1310 PB L 74709	Colorimetric analysis of o-phthalic acid in mixtures of benzoic acid and phthalic acid, by means of the phenolphthaleine reaction. 1944. In German.	1.50
1311-1313 PB L 74709	Polarographic determination of o-phthalic acid in mixtures of benzoic acid and phthalic acid. By Krauss. 1944. In German.	1.50
1314-1317 PB L 74709	Permanganate number of recycled oil. 1944. In German.	1.50
1318-1346 PB L 74709	Experience with the simultaneous determination of aldehydes and ketones. By Eckhardt. 1944. In German.	3.00
1347-1353 PB L 74709	Device for the automatic continuous feeding of a liquid from a storage container into a vessel. 1943. In German.	1.50
1354-1363 PB L 74709	Application of wofatites in analytical chemistry. By Sütterlin. 1943. In German.	1.50
1364-1370 PB L 74709	On the steam pressure curve of adipic acid. By Rast. 1943. In German.	1.50
1371-1406 PB L 74709	The physicochemical basis of extinction spectrography and its application in long-wave ultraviolet and in visible light. By Rast. 1942. In German.	4.00
1407-1424 PB L 74709	The ultraviolet spectroscopy as an aid for analyzing simple organic substances and understanding their constitution. By Eckhardt. 1942. In German.	2.00
1425-1435 PB L 74709	Determination of traces of SO_2 for air analysis in the open. By Seiferheld and others. 1943. In German.	1.50
1436-1444 PB L 74709	Methods of rapid determination of lead tetraethyl in aviation fuels. By Jahr and Koller. In German.	1.50
1445-1448 PB L 74709	Colorimetric determination of the iron content of nickel. 1943. In German.	1.50
1449-1451 PB L 74709	Colorimetric determination of the manganese content of nickel. By Schaefer. 1943. In German.	1.50
1452-1463 PB L 74709	Colorimetric process for the determination of sulfur in steel, using the photoelectric	

colorimeter according to Dr. E. Lange. By Pohl. In German. 1.50

1464-1465 PB L 74709 — Directions for photometric determination of magnesium in aluminum alloys in the presence of Cu, Mn, Ni, Zn, Fe, and Si. By Wulff. In German. 1.50

1466-1493 PB L 74709 — The photometric determination of magnesium in aluminum alloys. By Wulff. In German. 3.00

1494-1498 PB L 74709 — Quantitative analysis of aluminum by means of oxin. 1934. In German. 1.50

1499-1501 PB L 74709 — Preparation of solutions of titanium sulfate ($Ti_2(SO_4)_3$). 1931. In German. 1.50

1502-1507 PB L 74709 — Investigations on the analysis of perchlorate, chlorate and of mixtures of these compounds by means of titanium sulfate ($Ti_2(SO_4)_3$). 1931. In German. 1.50

1508-1533 PB L 74709 — Experiments for the preparation of beta-naphthylamine from beta-naphthol and ammonia, and preliminary calculations. By Huttner. 1933. In German. 3.00

1534-1538 PB L 74709 — Catalytic N-alkylation with ethyl ether and higher ethers. By Andrussow and Germann. 1934. In German. 1.50

1539-1543 PB L 74709 — The alkylation of aromatic amines. By Speer. 1935. In German. 1.50

1544-1547 PB L 74709 — The metal bomb tube, a practical laboratory appliance. By Fleming. 1933. In German. 1.50

1548-1552 PB L 74709 — Tetrachlorophthalic acid, an aid for identifying aromatic amines, particularly primary ones. By Fleming. 1933. In German. 1.50

1553-1573 PB L 74709 — The solubility of carbon dioxide, sulfur dioxide and hydrogen sulfide in organic liquids. By Feller. 1938. In German. 2.50

1574-1595 PB L 74709 — Continuous preparation of adipic acid from cyclohexanol and nitric acid. By Heinze. 1942. In German. 2.50

1596-1614 PB L 74709 — Continuous production of succinic acid from tetrahydrofuran and nitric acid. By Heinze. 1942. In German. 2.00

1615-1645 PB L 74709 — Preventing the attack of oxygen-free condensates upon ferrous materials by means of ammonia. By Wesley. 1941. In German. 3.50

1646-1656 PB L 74709 — Preliminary report on the status of the process for the preparation of maleic anhydride from succinic anhydride by chlorination. By Alt. 1940. In German. 1.50

1657-1658 PB L 74709 — Continuous process for the preparation of beta-decalol by hydrogenation of beta-naphthol. By Schuster and König. 1940. In German. 1.50

1659-1663 PB L 74709 — Continuous hydrogenation. 1940. In German. 1.50

1664-1672 PB L 74709 — Catalytic hydrogenation of free fatty acids to form the corresponding alcohols. 1941. In German. 1.50

1673-1677 PB L 74709 — Sulfonation of alcohols obtained by oxidation of paraffin from Baton Rouge. 1933. In German. 1.50

1678-1688 PB L 74709 — The energy factor in the formation of "Mepasin" sulfochloride from "Mepasin," sulfur dioxide and hydrogen chloride. By Hecht. 1939. In German. 1.50

1689-1699 PB L 74709 — Condensation products from ammonia salts, formaldehyde and organic compounds with reactive H-atoms, and possibilities of their use. By Ambruster and Krzikalla. 1938. In German. 1.50

1700-1714 PB L 74709 — Report on the continuous hydrogenation of adipodinitrile at Lu 115. By Bauer. 1941. In German. 1.50

1715-1740 PB L 74709 — Operating instructions for "Igevins." In German. 3.00

1741-1800 PB L 74709 — Operating instructions for the preparation of emulsions, dispersions, and solutions of plastics. By Hambsch. 1946. In German. 6.00

1801-1846 PB L 74709 — Operating instructions for the products made in the Palatinol plant. By Hambsch. 1946. In German. 5.00

PB L 17654. I. G. FARBENINDUSTRIE A. G. Manufacturing processes of aliphatic intermediates and other organic compounds. (FIAT Microfilm Reel C 67, Frames 1-968) Jan 1946. 1132 f. Price: Microfilm-$6.00 - Enlargement print-$113.50.

The items on this reel are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

PB Numbers Frames	Title	Price
L 47336 Frames 1-39	Aldol. In German.	$ 4.00
L 47337 Frames 40-47	Acetaldol. In German.	1.50
L 47338 Frames 48-95	Ethylacetate (including pressure distillation). In German.	5.00
L 47339 Frames 96-107	2-Ethyl-1,3-hexanediol. In German.	1.50
L 47340 Frames 108-179	Ether. In German.	7.50
L 47341 Frame 180	Methylester of acetylglycolic acid. In German.	1.50
L 47342 Frames 181-182	Ethyl ester of ethylglycolic acid. In German.	1.50
L 47343 Frame 183	Butylester of acetylglycolic acid. In German.	1.50
L 47344 Frame 184	Benzylester of acetylglycolic acid. In German.	1.50

Miscellaneous Chemicals (contd)

L 47345 Frames 186-189	Borefluoride acetic acid. In German.	1.50
L 47346 Frames 190-196	Butyric acid. In German.	1.50
L 47347 Frames 197-198	n-butyric anhydride. In German.	1.50
L 47348 Frames 199-200	1,3-Butyleneglycolformal. In German.	1.50
L 47349 Frames 201-207	Butylbutyrate. In German.	1.50
L 47350 Frames 208-219	Butanol. In German.	1.50
L 47351 Frames 220-267	Butylacetate. In German.	5.00
L 47352 Frames 268-292	1,3-Butyleneglycol. In German.	2.50
L 47353 Frames 293-296	Butoxyl. In German.	1.50
L 47354 Frames 297-312	Sodium chloroethane sulfonate. In German.	2.00
L 47355 Frames 313-350	Crotonaldehyde. In German.	4.00
L 47356 Frames 351-358	Crotonic acid. In German.	1.50
L 47357 Frame 359	Methylester of cyanoacetic acid. In German.	1.50
L 47358 Frames 360-362	Ethylester of cyanoacetic acid. In German.	1.50
L 47359 Frame 363	Butylester of cyanoacetic acid. In German.	1.50
L 47360 Frame 364	Dimethyl cyclohexanol oxalate. In German.	1.50
L 47361 Frame 365	Diglycol-di-isocaproic ester. In German.	1.50
L 47362 Frame 366	Diglycol-di-isoheptylic ester. In German.	1.50
L 47363 Frames 367-428	Acetic acid. In German. (Frame 400, missing. Several frames are poorly legible)	6.50
L 47364 Frames 429-432	Acetic anhydride. In German.	1.50
L 47365 Frames 433-434	Antifreeze HS 2239. In German.	1.50
L 47366 Frame 435	n-butyl ester of glycolic acid. In German.	1.50
L 47367 Frames 436-438	Methoxybutylester of glycolic acid. In German. (May reproduce poorly.)	1.50
L 47368 Frames 439-449	Glycoformal. In German. (Frame 447, missing. Poorly legible in parts)	1.50
L 47369 Frames 450-451	Methylester of glycolic acid. In German.	1.50
L 47370 Frames 452-453	Ethylester of glycolic acid. In German. (May reproduce poorly.)	1.50
L 47371 Frame 454	Butylester of glycolic acid. In German.	1.50
L 47372 Frame 455	Isopropylester of glycolic acid. In German.	1.50
L 47373 Frame 456	Ethylglycolester of glycolic acid. In German.	1.50
L 47374 Frame 457	Ethylester of butyrylglycolic acid. In German.	1.50
L 47375 Frame 458	Ethylester of methylglycolic acid. In German.	1.50
L 47376 Frame 459	Isocetylester of glycolic acid. In German.	1.50
L 47377 Frames 460-479	Isopropylalcohol. In German.	2.00
L 47378 Frames 480-481	Isobutyric anhydride. In German.	1.50
L 47379 Frames 482-483	Isobutoxy acetic acid. In German.	1.50
L 47380 Frames 484-485	Ethylester of isovaleric acid. In German.	1.50
L 47381 Frames 486-487	Isohexylacetate. In German.	1.50
L 47382 Frames 488-493	Copper carbonate for copper catalysts. In German.	1.50
L 47383 Frames 494-509	Methylacetate. In German.	2.00
L 47384 Frame 510	Filling of tank cars. In German.	1.50
L 47385 Frames 511-521	Methoxy butyraldehyde (aldol-ether). In German.	1.50
L 47386 Frames 522-526	Lactic acid ethylester. In German.	1.50
L 47387 Frames 527-531	Lactic acid butylester. In German.	1.50
L 47388 Frames 532-533	Methylglycolformal. In German.	1.50

Miscellaneous Chemicals (contd)

L 47389 Frames 534-547	Sodium acetate. In German.	1.50
L 47390 Frames 548-549	"Necsolvan P." In German.	1.50
L 47391 Frames 550-573	Hydroxy ethane sodium sulfonate. In German.	
L 47392 Frames 574-575	Calcining oxalic acid. In German.	1.50
L 47393 Frames 576-592	Diethyloxalate. In German.	2.00
L 47394 Frame 593	Butyloleate. In German.	1.50
L 47395 Frames 594-614	Polysolvan O. In German.	2.50
L 47396 Frame 615	Polysolvan AO. In German.	1.50
L 47397 Frames 616-653	Paraldehyde. In German.	4.00
L 47398 Frames 654-655	n-Propylacetate. In German.	1.50
L 47399 Frames 656-659	Propionic anhydride. In German.	1.50
L 47400 Frames 660-664	Pyranton A. In German.	1.50
L 47401 Frames 665-670	Ethanol; butanol. In German.	1.50
L 47402 Frame 671	Butylester of train-oil fatty acids. In German.	1.50
L 47403 Frames 672-710	Vinylacetate. In German. (Poor legibility)	4.00
L 47404 Frames 711-714	Vinylchloroacetate. In German.	1.50
L 47405 Frames 715-716	Methyltaurines. In German.	1.50
L 47406 Frames 717-723	Methyltaurine. In German.	1.50
L 47407 Frames 724-725	Ethyluresin. In German.	1.50
L 47408 Frames 726-732	Glyxerogen. In German.	1.50
L 47409 Frames 733-735	"Polysolvan E." In German.	1.50
L 47410 Frames 736-740	Taurine-ditaurine (separation of). In German.	1.50
L 47411 Frames 741-747	Sarcosine. In German.	1.50
L 47412 Frames 748-749	Isoheptyl acetate. In German.	1.50
L 47413 Frames 750-752	Acetonitrile. In German.	1.50
L 47414 Frames 753-761	Diglycolic acid. In German.	1.50
L 47415 Frames 762-778	Nickel catalyst for glyxerogen. In German.	2.00
L 47416 Frame 779	Cerium catalyst. In German.	1.50
L 47417 Frame 780	Zinc manganese catalyst. In German.	1.50
L 47418 Frame 781	Methyl formate. In German.	1.50
L 47419 Frames 782-784	Ethylformate. In German.	1.50
L 47420 Frame 785	n-Propylformate. In German.	1.50
L 47421 Frame 786	n-Butylformate. In German.	1.50
L 47422 Frames 787-788	Amylformate. In German.	1.50
L 47423 Frames 789-792	"Albanol." In German.	1.50
L 47424 Frame 793	"Leuna-oil" ester of acetyl-glycolic acid. In German.	1.50
L 47425 Frame 794	Amylalcohol from "sulfite oil." In German.	1.50
L 47426 Frame 795	Amylalcohol from fusel oil. In German.	1.50
L 47427 Frames 796-800	Isobutylacetate. In German.	1.50
L 47428 Frames 801-804	Oxiol. In German.	1.50
L 47429 Frames 805-807	"Dissolvan." In German.	1.50
L 47430 Frames 808-809	Butyleneglycoldiacetate. In German.	1.50
L 47431 Frames 810-817	Acetylacetone. In German.	1.50
L 47432 Frames 818-819	Aethylpropionate. In German.	1.50

Miscellaneous Chemicals (contd)

L 47433 Frames 820-821 — Amylbutyrate. In German. 1.50

L 47434 Frames 822-823 — Methyl and ethylester of ethylglycolic acid. In German. 1.50

L 47435 Frame 824 — Isopropylester of acetylglycolic acid. In German. 1.50

L 47436 Frame 825 — n-propylester of acetylglycolic acid. In German. 1.50

L 47437 Frames 826-827 — Amylpropionate. In German. 1.50

L 47438 Frames 828-829 — Benzylurethane. In German. 1.50

L 47439 Frames 830-839 — Butylurethane, cyclohexanslurethane, isobutanolurethane, isobutylmethane and n-butylurethane. In German. 1.50

L 47440 Frames 840-841 — Butoxy acetic acid. In German. 1.50

L 47441 Frame 842 — Butoxybutanol diglycolate. In German. 1.50

L 47442 Frame 843 — Butylester of butoxy acetic acid. In German. 1.50

L 47443 Frame 844 — 1,3-Butyleneglycol-mono-glycolate. In German. 1.50

L 47444 Frame 845 — Calcium butyrate. In German. 1.50

L 47445 Frames 846-849 — 1,3-Butyleneglycol monoacetate. In German. 1.50

L 47446 Frame 850 — Litmus solution (to test neutrality of esters). In German. 1.50

L 47447 Frame 851 — Benzylbutyrate. In German. 1.50

L 47448 Frames 852-853 — Butyric acid (technically pure). In German. 1.50

L 47449 Frame 854 — Butyric acid (distilled twice). In German. 1.50

L 47450 Frame 855 — Butyric acid (chem. pure). In German. 1.50

L 47451 Frame 856 — Methylester of butyric acid. In German. 1.50

L 47452 Frame 857 — Benzylacetate. In German. 1.50

L 47453 Frame 858 — Ethylester of butyric acid. In German. 1.50

L 47454 Frame 859 — 1,3-Butyleneglycol-di-n-butyrate. In German. 1.50

L 47455 Frame 860 — 1,3-Butyleneglycol-mono-n-butyrate. In German. 1.50

L 47456 Frames 861-863 — Benzylalcohol and benzylether. In German. (Frame 862 is missing). 1.50

L 47457 Frame 864 — Dibenzylether. In German. 1.50

L 47458 Frame 865 — n-Butylpropionate. In German. 1.50

L 47459 Frames 866-869 — Di-thio-di-butyleneglycol. In German. 1.50

L 47460 Frames 870-871 — Reharotonsäure processing of crude crotonic acid. In German. 1.50

L 47461 Frames 872-873A — Chloressigsäures sodium chloroacetate. In German. 1.50

L 47462 Frames 874-875 — Dicyclohexanol oxalate. In German. 1.50

L 47463 Frame 876 — Calcium acetate in solution. In German. 1.50

L 47464 Frame 877 — "Leuna-oil" ester of chloroacetic acid. In German. 1.50

L 47465 Frame 878 — Cobalt crotonate. In German. 1.50

L 47466 Frame 879 — Manganese crotonate. In German. 1.50

L 47467 Frame 880 — Lead crotonate. In German. 1.50

L 47468 Frame 881 — Anhydride of coconut oil fatty acids. In German. 1.50

L 47469 Frame 882 — β-chlorobutyric acid. In German. 1.50

L 47470 Frame 883 — Ethylester of β-chlorobutyric acid. In German. 1.50

L 47471 Frame 884 — Propylester of crotonic acid. In German. 1.50

L 47472 Frame 885 — Butylester of crotonic acid. In German. 1.50

L 47473 Frames 886-887 — Ethylester of crotonic acid. In German. 1.50

L 47474 Frame 888 — Methylester of crotonic acid. In German. 1.50

L 47475 Frame 889 — Dicyclohexanol phtalate. In German. 1.50

L 47476 Frames 890-891 — Dibutol-polybutol-dibutol techn. In German. 1.50

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Miscellaneous Chemicals (contd)

L 47477 Frames 892-893	Polytutyleneglycol. In German.	1.50
L 47478 Frame 894	Dimethyl oxamide. In German.	1.50
L 47479 Frame 895	Diglycolsäure-Di-isoheptylester of diglycolic acid. In German.	1.50
L 47480 Frame 896	Diglycolsäure-DI-isohexylester of diglycolic acid. In German.	1.50
L 47481 Frame 897	"Leuna-oil" ester of diglycolic acid. In German.	1.50
L 47482 Frame 898	Diisooctylester of diglycolic acid. In German.	1.50
L 47483 Frames 899-900	"Dissolvan." In German.	1.50
L 47484 Frame 901	Dimethylester of diglycolic acid. In German.	1.50
L 47485 Frame 902	Diethylester of diglycolic acid. In German.	1.50
L 47486 Frame 903	Dipropylketone. In German.	1.50
L 47487 Frame 904	"Palmkernfettamin"-Chlorhydrate. In German. (Partly illegible.).	1.50
L 47488 Frame 905	Diglycolsäure-Amylester of diglycolic acid. In German.	1.50
L 47489 Frame 906	Diglycolsäure-Di-butylester of diglycolic acid. In German.	1.50
L 47490 Frame 907	Dimethylacetal. In German.	1.50
L 47491 Frames 908-911	Dipropionylmethane. In German.	1.50
L 47492 Frame 912	Dichloroethyl acetate. In German.	1.50
L 47493 Frame 913	Vinegar aroma. In German.	1.50
L 47494 Frame 914	Isoheptylester of glycolic acid. In German.	1.50
L 47495 Frame 915	Isohexylester of glycolic acid. In German.	1.50
L 47496 Frame 916	Glycerine tricrotonate. In German.	1.50
L 47497 Frames 917-923	Glycolic acid in solution. In German.	1.50
L 47498 Frame 924	Glycolic acid, crystallized. In German.	1.50
L 47499 Frame 925	Glycerol-tri-chloracetic ester. In German.	1.50
L 47500 Frames 926-927	Hexane triol-di-acetate. In German.	1.50
L 47501 Frame 928	Glycolsäures sodium glycolate. In German.	1.50
L 47502 Frame 929	Calcium glycolate. In German.	1.50
L 47503 Frame 930	Glycerol tripropionate. In German.	1.50
L 47504 Frame 931	n-Butylester of isobutyric acid. In German.	1.50
L 47505 Frame 932	Isobuttersäure-Iso-butylester of isobutyric acid. In German.	1.50
L 47506 Frames 933-936	Isoheptyl acetate. In German.	1.50
L 47507 Frames 937-944	Isopropyl acetate. In German.	1.50
L 47508 Frames 945-949	Crude isobutyric acid. In German.	1.50
L 47509 Frame 950	Isobutyric acid, technically pure. In German.	1.50
L 47510 Frames 951-952	Isobutyric acid, chem. pure. In German.	1.50
L 47511 Frame 953	Isobutylpropionate. In German.	1.50
L 47512 Frame 954	Isobutyl-n-butyrate. In German.	1.50
L 47513 Frame 955	Isopropyl-n-butyrate. In German.	1.50
L 47514 Frames 956-958	"Leuna-oil" propionate. In German.	1.50
L 47515 Frame 959	Methylcyclohexanol oxalate. In German.	1.50
L 47516 Frame 960	Isobutylester of monochlor-acetic acid. In German.	1.50
L 47517 Frame 961	Methylal. In German.	1.50
L 47518 Frame 962	Methylester of methoxy acetic acid. In German.	1.50
L 47519 Frame 963	Methoxybutanoldiglycolate. In German.	1.50
L 47520 Frame 964	Methoxybutanol ester of palmitic acid. In German.	1.50

Miscellaneous Chemicals (contd)

L 47521 Frame 965	Metnoxybutanol ester of cocoonut fatty acids. In German.	1.50
L 47522 Frame 966	Methoxybutanol ester of stearic acid. In German.	1.50
L 47523 Frames 967-968	Methoxy acetic acid. In German.	1.50
L 47335	Manufacturing processes of aliphatic intermediates and other organic compounds: Index. In German and English.	1.50

PB L 17655. I. G. FARBENINDUSTRIE A. G. Manufacturing processes of aliphatic intermediates and other organic compounds. (FIAT Microfilm Reel C 58, Frames 969-1431) Jan 1946. 522 f. Price: Microfilm-$6.00--Enlargement print-$52.50.
The items on this reel are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

PB Numbers Frames	Title	Price
L 50072 Frame 969	Methylester of methylglycolic acid. In German.	$ 1.00
L 50071 Frame 970	Benzylester of monochloroacetic acid. In German.	1.00
L 50070 Frame 971	Mono-glycerolester of lactic acid. In German.	1.00
L 50019 Frame 972	Fermentation lactic acid. In German.	1.00
L 50018 Frames 973-976	Methoxybutanol. In German.	1.00
L 50017 Frame 977	Isopropylester of lactic acid. In German.	1.00
L 50016 Frames 978	Ethylester of lactic acid. In German.	1.00
L 50015 Frame 979	Propylester of lactic acid. In German.	1.00
L 50014 Frame 980	n-Propylester of monochloroacetic acid. In German.	1.00
L 50013 Frames 981-982	Monochloressigsaure-Iso-Propylester of monochloroacetic acid. In German.	1.00
L 50012 Frame 983	Methylpropionate. In German.	1.00
L 50011 Frames 984-985	Isobutylester of lactic acid. In German.	1.00
L 50010 Frame 986	Butylester of monochloroacetic acid. In German.	1.00
L 50009 Frames 987-988	Ethylester of monochloroacetic acid. In German.	1.00
L 50008 Frame 989	Methylester of monochloroacetic acid. In German.	1.00
L 50007 Frame 990	Amylester of lactic acid. In German.	1.00
L 50006 Frames 991-994	"Oxyacetal" (Bis(3-hydroxybutoxy) -(1-propionyl)-methane). In German.	1.00
L 50005 Frame 995	Ethylglycolester of α hydroxy isobutyric acid. In German.	1.00
L 50004 Frame 996	Butoxybutylester of oleic acid. In German.	1.00
L 50003 Frame 997	Methoxybutylester of oleic acid. In German.	1.00
L 50002 Frames 998-999	Methylester of oleic acid. In German.	1.00
L 50001 Frames 1000-1001	Ethylester of oleic acid. In German.	1.00
L 50000 Frames 1002-1010	Diethylester of oxalic acid. In German.	1.00
L 49999 Frame 1011	Di-n-butylester of oxalic acid. In German.	1.00
L 49998 Frames 1012-1013	Di-benzylester of oxalic acid. In German.	1.00
L 49997 Frames 1014-1016	Di-methylester of oxalic acid. In German.	1.00
L 49996 Frames 1017-1018	Propiophenone. Palatinol HS. In German.	1.00
L 49994 Frame 1019	"Polysolvan SHS". In German.	1.00
L 49993 Frames 1020-1021	"Polysolvan J". In German.	1.00
L 49992 Frame 1022	"Polysolvan A". In German.	1.00
L 49991 Frames 1023-1025	"Pg 1 St 2". In German.	1.00
L 49990 Frames 1026-1028	"Pg 1 St 1". In German.	1.00
L 49989 Frame 1029	Polyglycerol. In German.	1.00
L 49988 Frames 1030-1031	Propionic acid. In German.	1.00
L 49973 Frame 1032	Propionic acid, techn. pure. In German.	1.00
L 49972 Frame 1033	Dibutylester of phtalic acid. In German.	1.00

Miscellaneous Chemicals (contd)

L 49971 Frame 1034	n-Propylpropionate. In German.	1.00
L 49970 Frame 1035	Diamylester of phthalic acid. In German.	1.00
L 49969 Frame 1036	n-Propyl-n-butyrate. In German.	1.00
L 49968 Frame 1037	n-Propylformate. In German.	1.00
L 49967 Frame 1038	Resorcinol diacetate. In German.	1.00
L 49966 Frame 1039	Butylester of soybean oil fatty acid. In German.	1.00
L 49965 Frame 1040	Salicylsäure-n-Butylester of salicylic acid. In German.	1.00
L 49964 Frame 1041	Salicylsäure-Ethylester of salicylic acid. In German.	1.00
L 49963 Frames 1042-1044	"Stabilisal A". In German.	1.00
L 49962 Frames 1045-1046	"Leuna-oil" ester of stearic acid. In German.	1.00
L 49961 Frame 1047	Stearic anhydride. In German.	1.00
L 49960 Frame 1048	"Tamasol L 1". In German.	1.00
L 49959 Frame 1049	"Tamasol L 2". In German.	1.00
L 49958 Frame 1050	Glycerol tributyrin. In German.	1.00
L 49957 Frames 1051-1052	"W 21" (Plasticizer). In German.	1.00
L 49956 Frames 1053-1054	Dibutylester of tartaric acid. In German.	1.00
L 49955 Frame 1055	Di-isopropylester of tartaric acid. In German.	1.00
L 49954 Frames 1056-1059	Di-ethylester of tartaric acid, crude. In German.	1.00
L 49953 Frame 1060	Di-ethylester of tartaric acid, pure. In German.	1.00
L 49952 Frame 1061	n-Propylbutyrate. In German.	1.00
L 49951 Frame 1062	Isobutylbutyrate. In German.	1.00
L 49950 Frame 1063	Oxidation of benzylidene acetone to cinnamic acid. In German.	1.00
L 49949 Frame 1064	Benzylidene acetone. In German.	1.00
L 49948 Frame 1065	1,2-ethanediol acetate. In German.	1.00
L 49947 Frames 1066-1071	1,3-Butylene glycol-di-urethane. In German.	1.00
L 49946 Frames 1072-1084-	n-Butyluresin ("Uresin B"). In German.	1.00
L 49945 Frame 1085	Benzyluresin. In German.	1.00
L 49944 Frame 1086	1,3-Butylenglycol-benzylether. In German.	1.00
L 49943 Frame 1087	Butyloxybutanol. In German.	1.00
L 49942 Frames 1088-1089	Chlorobutanol. In German.	1.00
L 49941 Frame 1090	1,3-Butanediol-monolactate. In German.	1.00
L 49940 Frames 1091-1095	1,3-Butanediol-mono-methylether. In German.	1.00
L 49939 Frame 1096	1,3-Butanediol-mono-ethylether. In German.	1.00
L 49938 Frame 1097	Dibutylether. In German.	1.00
L 49937 Frame 1098	Ethylene oxamide. In German.	1.00
L 49936 Frames 1099-1100	Triacetin. In German.	1.00
L 49935 Frame 1101	Nickel carbonate on pumice powder. In German.	1.00
L 49934 Frame 1102	Nickel nitrate. In German.	1.00
L 49933 Frame 1103	Triglycol-di-iso-butyric ester. -"Gelaton 3". In German.	1.00
L 49932 Frame 1104	Ethylidene-di-acetate. In German.	1.00
L 49931 1105-1107	β-Chloro-propionyl chloride. In German.	1.00
L 49930 Frame 1108	Hexitan-tetra-"Leuna" carboxylic ester. In German.	1.00
L 49929 Frames 1109-1110	Hexitane-tetra-(fatty acid first runnings)-2-ester and toluoene-2-carboxylic acid chloride. In German.	1.00
L 49928 Frame 1110-A	Plasticizer 1008. In German.	1.00

Miscellaneous Chemicals (contd)

L 49927 Frame 1111 — Di-o-toluyl-peroxyde. In German. 1.00

L 49926 Frame 1112 — Plasticizer DU. In German. 1.00

L 49925 Frame 1113 — Plasticizer PA. In German. 1.00

L 49924 Frames 1114-1116 — Plasticizer W 21 (Butylene-glycol-urethane). In German. 1.00

L 49923 Frames 1117-1118 — Distillation of chloroprene for purification. In German. 1.00

L 49922 Frames 1119-1121 — Di-isoheptylester of camphoric acid. In German. 1.00

L 49921 Frames 1122-1123 — "Emulsion 70/30". In German. 1.00

L 49920 Frames 1124-1131 — "Appretan EMN". In German. 1.00

L 49919 Frames 1132-1134 — "Mowilith D 2". In German. 1.00

L 49918 Frames 1135-1136 — "Mowilith DV", about 50% In German. 1.00

L 49917 Frame 1137 — "Mowilith DV 32", about 58% In German. 1.00

L 49916 Frames 1138-1141 — "Mowilith D Type AB[1], about 60%. In German. 1.00

L 49915 Frames 1142-1143 — Polyvinylacetate emulsion without "Vinarol". In German. 1.00

L 49914 Frames 1144-1145 — "Emulsion AB 17". In German. 1.00

L 49913 Frames 1146-1147 — "Mowilith MP 850 D" ca. 60%. In German. 1.00

L 49912 Frames 1148-1170 — "Emulsion MV" and "MVA" 32 u. 41" (Directions for producing softened "MV" emulsions). In German. 2.00

L 49911 Frames 1171-1172 — "Emulsion VW 84". In German. 1.00

L 49910 Frames 1173-1174 — "Mowlith H". In German. 1.00

L 49909 Frames 1175-1193 — "Mowlith 70" in pearl polymerized form. In German. 2.00

L 49908 Frames 1194-1196 — "Mowlith H, 115, HX" in blocks. In German. 1.00

L 49907 Frames 1197-1198 — "Mowlith", solid for Le. In German. 1.00

L 49906 Frames 1199-1201 — "Mowlith Ct. 10, Ct. and 2,5". In German. 1.00

L 49905 Frames 1202-1204 — "Mowlith 15" about 60% in ethyl-acetate. In German. 1.00

L 49904 Frames 1205-1209 — "Mowlith 20" about 60% in ethyl-acetate. In German. 1.00

L 49903 Frames 1210-1217 — "Mowlith 30" about 60%. In German. 1.00

L 49902 Frames 1218-1223 — "Mowlith ABC" about 70% in solvent mixture. In German. 1.00

L 49901 Frame 1224 — "Mowlith HL 50". In German. 1.00

L 49900 Frames 1225-1227 — "Mowlith H, 115, HX" in blocks. In German. 1.00
Duplicate of 49908

L 48999 Frames 1228-1230 — "Vinarol supra". In German. 1.00

L 49898 Frames 1231-1238 — "Vinarol HX". In German. 1.00

L 49897 Frames 1239-1243 — "Vinarol 70" about 7-8% solution. In German. 1.00

L 49896 Frame 1244 — Hydrolysis of "Mowlith O" to "Vinarol". In German. 1.00

L 49895 Frames 1245-1257 — "Vinarol HB", "H", "HX" and "80 conc." In German. 1.00

L 49894 Frames 1258-1260 — "Dentalhars" chlorobenzene solution. In German. 1.00

L 49893 Frames 1261-1272 — Interior lacquer SX old. Readjustment. Camouflage-lacquer. In German. 1.00

L 49892 Frames 1273-1275 — Phenytal lacquer solution D. In German. 1.00

L 49891 Frames 1276-1306 — "Bakelite A" (Special resin H) and "Asplit" solutions. In German. 3.00

L 49890 Frames 1307-1308 — "Resin 3383". In German. 1.00

L 49889 Frames 1309-1310 — "Resin 3925". In German. 1.00

L 49888 Frames 1311-1316 — "Kunststoff 28840". In German. 1.00

L 49887 Frames 1317-1320 — Xylol-cresoticacid-resin. In German. 1.00

L 49886 Frames 1321-1328 — Paper glue B. In German. 1.00

L 49885 Frames 1329-1330 — "Binding agent W". In German. 1.00

L 49884 Frames 1331-1336 — Adhesive solution Ch. In German. 1.00

L 49883 Frame 1336 — Addition agent for "Adhesive solution Ch." In German. 1.00

L 49882 Frames 1337-1340 — "Povinal BA". In German. 1.00

L 49881 Frames 1341-1343 — "Povinal C". In German. 1.00

L 49880 Frames 1344-1348 — "Povinal St". In German. 1.00

L 49879 Frames 1349-1361 — "Povinal St- and St L" (ammonium salt solution). In German. 1.00

L 49878 Frames 1362-1368 — "Mowlith O 70". In German. 1.00

L 49877 Frames 1369-1374 — "Povinal" pressed material 116, "Masse R 1," water soluble. In German. 1.00

L 49876 Frames 1375-1376 — "Styromal" lacquer 7% and 10%. In German. 1.00

L 49875 Frames 1377-1380 — "Appretan H neu." In German. 1.00

L 49874 Frames 1381-1383 — "Appretan KS". In German. 1.00

L 49873 Frames 1384-1387 — Betachloropropionic acid diphenyl-amide. Acrylic acid diphenyl-amide. In German. 1.00

L 49872 Frames 1388-1389 — "Hostalon A 70". In German. 1.00

L 49871 Frames 1390-1392 — "Mowital O 70". In German. 1.00

L 49870 Frames 1393-1394 — Copolymer of vinylchloride and vinyl acetate. In German. 1.00

L 49869 Frames 1395-1396 — "Hostalon IB". In German. 1.00

L 49868 Frames 1397-1399 — "Hostalon IB 50". In German. 1.00

L 49867 Frames 1400-1404 — "Hostalon IB 70". In German. 1.00

L 49866 Frames 1405-1406 — "Hostalon IB 70" solution for compound glass. In German. 1.00

L 49865 Frames 1407-1414 — "Mowital IB 90/40". In German. 1.00

L 49864 Frames 1415-1417 — Anthracene-crotonic acid and anthracene-maleic anhydride. In German. 1.00

L 49863 Frame 1418 — Polyacrylsäurecxäthylamid. Polyacrylic acid hydroxy ethyl-amide. In German. 1.00

L 49862 Frames 1419-1422 — "Hostalon OH/IB 90" and "70". In German. 1.00

L 49861 Frames 1423-1424 — "Hostalon" solution about 17.6%. In German. 1.00

L 49860 Frames 1425-1427 — "Mowital HF". In German. 1.00

L 49859 Frame 1428 — "Mowital HXF". In German. 1.00

L 49858 Frame 1429 — "Mowital NF". In German. Frame 1430 is missing. 1.00

L 49857 Frame 1431 — "Mowital" pressed material I in solution. In German. 1.00

L 49856 — Manufacturing processes of aliphatic intermediates and other organic compounds; Index. In English and German. 1.00

PB L 17684. I.G. FARBENINDUSTRIE A.G. Papers on catalysts, alumina, and hydrogenation, Hochdruckversuche Laboratories. (FIAT Microfilm Reel LF 102, Frames 1-727, 16 mm. microfilm). Jan 1946. 726 f. Price: Microfilm-$6.00 - Enlargement Print-$73.00
The individual items on this reel are listed below and will be available as **enlargement** prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel In German.

PB Numbers Frames	Title	Price
L 65481 Frames 1-2	Use of alumina-W-Ni-contact 7846 # 250 - 8376 for various processes. In German.	$1.00
L 65482 Frames 3-15	Report on activity November 1941. In German.	1.00
L 65483 Frames 16-21	Alumina-molybdenum-nickel- and alumina-tungsten-nickel prehydrogenation cavalysts. In German.	1.00
L 65484 Frame 22	Requirements of tungsten for the two stage benzination with various combinations of catalysts. In German.	1.00
L 65485 Frames 23-30	$ZnO + Mo_3$ or $ZnO + MgWO_4$ replacing vanadium in the aromatization catalyst 7019. In German.	1.00
L 65486 Frames 31-32	Conference on 3-14-41 at Lu 558 on measures for storing catalysts and raw materials for catalysts with regard to air raids. In German.	1.00
L 65487 Frames 33-44	Catalyst 7846 for prehydrogenation of Scholven medium oil from coal liquefaction of Bruex tar (a- + s-i oil) and of s-middle oil from Rhine-lignite. In German.	1.00
L 65488 Frames 45-51	Reduction of 7019-catalyst in normal operations with coal liquefaction middle oil. In German.	1.00
L 65489 Frames 52-64	Comparing the dehydrogenation catalysts 7911 (Leuna) with 7360 Ch. 6 (Lu) at 10 and 25 atm. and graduated temperature (part 2). In German.	1.00
L 65490 Frames 65-66	Notes on a conference at Op. 299 on silica gel. In German.	1.00
L 65491 Frames 67-69	Preliminary comparison of catalyst 7612/350°C with 7612 and 7360/350°C during dehydrogenation. In German.	1.00

L 65492 Frames 70-81 — Aromatisation of middle oil from coal liquefaction. In German. 1.00

L 65493 Frames 82-84 — Quality of residual gasoline in aromatising catalysts bleaching earth or silicate base. In German. 1.00

L 65494 Frames 85-89 — Aromatising with Weilheim catalyst at 600 atm. In German. 1.00

L 65495 Frames 90-99 — Causes for differences in quality of residual gasoline from aromatizing coal liquefaction products. In German. 1.00

L 65496 Frames 100-102 — Gas formation during aromatisation at 250, 450 and 600 atm. In German. 1.00

L 65497 Frames 103-104 — Aromatization at 250 atm, catalysts (supplement to report of 1-14-41) In German. 1.00

L 65498 Frames 105-109 — Aromatization at 250 atm, Terrana catalysts. In German. 1.00

L 65499 Frames 110-112 — Aromatization at 250 atm. Compound catalysts. In German. 1.00

L 65500 Frames 113-114 — Aromatization at 300 and 450 atm. Present state. In German. 1.00

L 65501 Frames 115-117 — Experiments on aromatization. Present state. In German. 1.00

L 65502 Frames 118-121 — Aromatizing benzination over 7019. In German. 1.00

L 65503 Frames 122-124 — Aromatization of 5058-B-middle oil Scholven over various catalysts. In German 1.00

L 65504 Frames 125-130 — Aromatization of Sumpf middle oil from K 1156 ("Velsen" coal). In German. 1.00

L 65505 Frames 131-134 — Experiences with the synthesis oven of chamber 506. (re problem: gas recycling- or emulsion method?) In German. 1.00

L 65506 Frames 135-148 — Synthesis plant - Ludwigshafen. In German. 1.00

L 65507 Frames 149-155 — Notes on meeting at "Haus der Technik" in Essen, on progress in development of "Ruhrchemie" synthesis (Fischer-Tropsch process). In German. 1.00

L 65508 Frames 156-157 — Velocity and times of contact in processing coal in the Sumpf phase. In German. 1.00

L 65509 Frames 158-200 — Exchange of experiences on alumina, Oppau, 7-6-1943. In German. 3.00

L 65510 Frames 201-208 — Development of the catalysts for prehydrogenation. Part I, up to catalyst 7745. In German. 1.00

L 65511 Frames 209-217 — State of experiments on prehydrogenation 8-8-40. (Improvement of the Fe-W-Ni-catalyst 6719). In German. 1.00

L 65512 Frames 218-219 — Prehydrogenation over catalysts based on activated alumina. In German. 1.00

L 65513 Frames 220-221 — Report of the catalyst factory on prehydrogenation-catalysts. In German. 1.00

L 65514 Frames 222-223 — Experiments on prehydrogenation with catalysts on alumina. In German. 1.00

L 65515 Frames 224-225 — The present status of experiments on prehydrogenation catalysts. In German. 1.00

L 65516 Frames 226-235 — Prehydrogenation. In German. 1.00

L 65517 Frames 236-241 — Improvement of "6719" by the addition of various components. In German. 1.00

L 65518 Frames 242-248 — DHD-gasoline endpoint 165 and 185°C. In German. 1.00

L 65519 Frames 249-256 — Dehydration and refining of polymer gasoline. In German. 1.00

L 65520 Frames 257-266 — DHD catalyst tests in 100 cc furnaces. In German. 1.00

L 65521 Frames 267-272 — DHD-catalyst tests in 100 cc furnaces. In German. 1.00

L 65522 Frames 273-276 — Processing of Hungarian gasoline to DHD gasoline. In German. 1.00

L 65523 Frames 277-291 — DHD-catalyst tests in 100 cc furnaces. In German. 2.00

L 65524 Frames 292-300 — Processing of Sumpf gasoline from K 1242 to DHD-gasoline in the 40 litre furnace 601. In German. 1.00

L 65525 Frames 301-309 — Processing of Zeitz TTH gasoline to a high power fuel by the DHD method. In German. 1.00

L 65526 Frames 310-319 — Processing of gasoline from the wild aromatization (catalyst 7501) by the DHD method. In German. 1.00

L 65527 Frames 320-326 — DHD experiments on Rumanian heavy petroleum gasolines processed in Poelits. In German. 1.00

L 65528 Frames 327-334 — Dehydrogenation of Rumanian heavy gasoline over powdery catalyst. In German. 1.00

L 65529 Frames 335-349 — 600-atm aromatization of middle oil from coal liquefaction as preliminary step for the preparation of DHD high power fuel. In German. 2.00

L 65530 Frames 350-353 — Utilisation of waste DHD-catalyst (7360) by re-forming after previous peptization. (Experiments in a 100 cc furnace). In German. 1.00

L 65531 Frames 354-382 — Inhibition of dehydrogenation, and permanent damage to DHD catalyst by oxygen-, nitrogen-, and sulfur-compounds and by unsaturated compounds. In German. 3.00

L 65532 Frames 383-395 — Testing DHD catalysts in a 1 liter oven. In German. 2.00

L 65533 Frame 396 — Note on the problem of secondary heating of DHD catalysts after saturation with ammonium molybdate. In German. 1.00

L 65534 Frames 397-403 — Removal of sulfurdioxide for regeneration of DHD unit chambers. In German. 1.00

L 65535 Frames 404-409 — DHD gasoline, quality and yield, Ka 807 Iu. In German. 1.00

L 65536 Frames 410-421 — Dehydration at 50 and 15 atm. Comparison of costs. In German. 1.00

L 65537 Frames 422-426 — Aviation gasoline from Estonian shale oil. In German. 1.00

L 65538 Frames 427-433 — Hydrogenation and catalytic cracking of petroleum-gas oil catalytically cracked. In German. 1.00

L 65539 Frames 434-441 — On Ni-H-dehydrogenation of gasolines rich in naphthene. In German. 1.00

L 65540 Frames 442-449 — Experiments on catalysts for dehydrogenation (Experiments with 6434 gasolines from coal liquefaction- and coal tar-middle oil. In German. 1.00

L 65541 Frames 450-456 — On some possibilities of supplying heat in dehydrogenation of gasoline over 6718. In German. 1.00

L 65542 Frames 457-461 — Catalytic dehydrogenation of 5058/6434 Scholven heavy stripper gasoline fraction 90-180°C and 7019-aromatization gasoline fraction 160-190°C over K 7360. In German. 1.00

L 65543 Frames 462-471 — DHD experiments in the 100 ltr. oven. 1st report: Processing of the fraction 160-190° from the 7019 aromatization of coal liquefaction middle oil in chamber 501. In German. 1.00

L 65544 Frames 472-480 — Dehydrogenation of fractions from 5058/6434 coal gasoline. Part I. Fraction 70-100° and 100-130°. In German.

L 65545 Frames 481-492 — Dehydrogenation under hydrogen pressure over moving catalyst. Report 9: Dehydrogenation of coal heavy gasoline "Scholven." In German. 1.00

L 65546 Frames 493-495 — Testing a sample of the Mathilde mine for suitability for hydrogenation (experiments in rotating autoclave). In German. 1.00

L 53952 Frames 496-499 — Evaluation and preliminary results of hydrogenation on samples of Rumanian coal in the autoclave by Prof. Heintze. In German. 1.00

L 65547 Frames 500-501 — Tests on catalyst, particularly regarding the effect of the addition of "Sulfigras" on the hydrogenation of Upper Silesian coal in the rotating autoclave. In German. 1.00

L 65548 Frames 502-503 — Decreasing and rising temperature in hydrogenation of Upper Silesian coal. (Experiments in the rotating autoclave. In German. 1.00

L 65549 Frames 504-508 — Hydrogenation of oxydized coal in the autoclave at 600 atm. In German. 1.00

L 65550 Frames 509-511 — Results of hydrogenation of two samples of wood tar from Sweden in the rotating autoclave. In German. 1.00

L 65551 Frames 512-514 — Janina coal. Present results of tests in the rotating autoclave. In German. 1.00

L 65552 Frames 515-518 — Experiments with hydrogenation in rotating autoclave using boro fluoride as catalyst for coal. (Experiments at 300 and 600 atm in rotating autoclave). In German. 1.00

L 65553 Frames 519-522 — Results of hydrogenation of two samples of coal from pit "Gute Hoffnung" (formerly Janina), in the rotating autoclave. In German. 1.00

L 65554 Frames 523-526 — Testing low temperature carbonising residues of shale for their suitability as Sumpf phase catalysts. (Experiments at 600 atm in the rotating autoclave). In German. 1.00

L 65555 Frames 527-529 — Substitute for ammonium chloride in hydrogenation of Scholven coal. (Experiments at 350 atm in the rotating autoclave.) In German. 1.00

L 65556 Frames 530-532 — Early hydrogenation experiments with arsenic compounds. In German. 1.00

L 65557 Frames 533-534 — Hydrogenation experiments with gas purification agents of Ruhrgas A.G. in the rotating autoclave. In German. 1.00

L 65558 Frames 535-540 — Early hydrogenation experiments with chlorinated and oxidized coal in an autoclave. In German. 1.00

L 65559 Frames 541-545 — Hydrogenation results with Janina coal (Auschwitz) K 1262 (of 4-12-43) in the rotating autoclave. In German. 1.00

L 65560 Frames 546-548 — Hydrogenation results with Wyslowitz coal K 1263 in the rotating autoclave, at 350 and 600 atm pressure. In German. 1.00

L 65561 Frames 549-551 — Possibility of replacing ammonium chloride in the hydrogenation of Ruhr coal. (Early experimental results.) In German. 1.00

L 65562 Frame 552 — Preliminary hydrogenation results with the help of elementary sulfur in various products. (Experiments in the rotating autoclave.) In German. 1.00

L 65563 Frames 553-554 — Experiments for isomerizing n-heptane over 5058 in a rotating autoclave. In German. 1.00

L 65564 Frames 555-557 — Early hydrogenation experiments in the autoclave with elementary sulfur. In German. 1.00

L 65565 Frames 558-563 — Experiments with hydrogenation of Spanish coal in the rotating autoclave at 350 and 600 atm. In German. 1.00

L 65566 Frames 564-565 — Results of experiments with Rhine lignite in the autoclave. In German. 1.00

L 65567 Frames 566-568 — Admixture of coal tar pitch to Rhine lignite (hydrogenation experiments in the rotating autoclave.) In German. 1.00

L 65568 Frames 569-573 — Experiments for the decomposition and hydrogenation of Esthonian and other shales and shale concentrates in the autoclave. In German. 1.00

L 65569 Frames 574-575 — Experiments for the decomposition of Bulgarian oil shale (Bresnik) (S 21) carried out on Oct 20, 1941 in the autoclave. In German. 1.00

L 65570 Frames 576-577 — Replacing iron sulfate by "Lux Mass" or "Bayer Mass" H_2SO_4 in the hydrogenation of Upper Silesian coal K 1242. (Experiments in a rotating autoclave. In German. 1.00

L 65571 Frames 578-579 — Note on formation of "caviar" with Rhine lignite ash analysis of lignite. In German. 1.00

Miscellaneous Chemicals (contd)

L 65572 Frames 580-582 — Influence of the free hydrogen and volatiles on the crude tar yield, and dependence of the hydrogenation suitability on the crude tar yield and on the presence of free hydrogen and volatiles in Upper Silesian and Dombrowa coal. In German. 1.00

L 65573 Frames 583-584 — Experiments for the hydrogenation of concentrate of Esthonian oil shale in the rotating autoclave at 300 atm. In German. 1.00

L 65574 Frames 585-587 — Hydrogenation results of samples of coal from the Upper Silesian "Fuerstengrube" and "Valeskegrube" in the rotation autoclave. In German. 1.00

L 65575 Frames 588-590 — Testing 2 generator flue dust samples from low temperature carbonisation coke "Hercules" for their suitability as catalyst carriers. (Experiments in the rotating autoclave.) In German. 1.00

L 65576 Frames 591-592 — Suitability for hydrogenation and value of low temperature carbonization in Ruhr coal. In German. 1.00

L 65577 Frames 593-594 — Experiments on decomposing shale from the "Jessel" pit (S 20) in the rotary autoclave. In German. 1.00

L 65578 Frames 595-599 — Experiments on hydrogenation of old coal in the rotary autoclave at 600 atm. In German. 1.00

L 65579 Frames 600-601 — Vanadium as catalyst in the Sumpf phase. (Early and more recent experiments in the rotary autoclave.) In German. 1.00

L 65580 Frames 602-606 — On the problem of pasting oil for the pressure extraction of coal. In German. 1.00

L 65581 Frames 607-610 — Catalyst experiments with "Welheim" pitch mash in the rotary autoclave at 600 atm. In German. 1.00

L 65582 Frames 611-614 — Processing of Esthonian shale oil. In German. 1.00

L 65583 Frames 615-624 — Extraction experiments in the rotary autoclave for producing primary bitumen. In German. 1.00

L 65584 Frames 625-633 — Hydrogenation experiments for determining the influence of sulfur in Upper Silesian coal K 1180 and K 1197 in the rotary autoclave at 600 atm. In German. 1.00

L 65585 Frames 634-634 — Notes on the Paris conference of Aug 22, 1940 (Rue Dr. Lancereaux) concerning the installation of the refinery in Gonfreville. In German. 1.00

L 65586 Frames 635-640 — Production of fuel in Northern France. In German. 1.00

L 65587 Frames 641-653 — Hydrogenation plant Lievin. In German. 1.00

L 65588 Frames 654-666 — Hydrogenation plant Bethune. In German. 1.00

L 65589 Frames 667-671 — Fischer synthesis plant Courrieres. In German. 1.00

L 65590 Frames 672-674 — Analysis of gasolines from Bethune and Lievin. In German. 1.00

L 65591 Frames 675-686 — Benzination of B-middle oil from Gardanne lignite coal. In German. 1.00

L 65592 Frames 687-695 — Catalytic pressure hydrogenation of Gardanne coal in small scale experiments at Ludwigshafen/Rhine. In German. 1.00

L 65593 Frames 696-702 — Yield from Gardanne coal. In German. 1.00

L 65594 Frames 703-704 — Report on a conference on the Japanese coal hydrogenation plant on April 27, 1944 at the "Laenderbank," Berlin. In German. 1.00

L 65595 Frames 706-706 — Notes on a conference with the Japanese on preparing isooctane from isobutyl alcohol on July 22, 1943 at Berlin. In German. 1.00

L 65596 Frames 707-710 — Quality of gasoline for Japan plant. In German. 1.00

L 65597 Frames 711-727 — The coal from the Upper Silesian coalfield. In German. 2.00

L 65480 — Papers on catalysts, alumina and hydrogenation, Hochdruckversuche Laboratorien. I.G. Farbenindustrie (Index). 1.00

* PB L 81088. LOVELESS, A. H. The production of carbon black from carbon monoxide. (BIOS Final Rept 1399, Item 22) n. d. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

This report is on the interrogation of Dr. Barth and Dr. Kloepfer. Dr. Kloepfer did a little research on the production of carbon black from carbon monoxide by passing the gas over heated ferric oxide at atmospheric pressure. The method is given. Dr. Barth was employed, during the war by Kuhlmann at Lille, where carbon black was made from carbon monoxide obtained from a synthetic ammonia plant in which water gas was scrubbed with water at 12 ats. pressure to remove carbon dioxide, after which carbon monoxide was absorbed in cuprous chloride. The carbon monoxide was then liberated and compressed to 6 ats. at which pressure it was used for the production of the black. Neither of these methods produced a good quality of carbon black for use in rubber. Table attached gives results of these tests. Dr. Barth was questioned regarding the influence of the following factors on the reaction for the production of carbon black on the effect of: (1) temperature, (2) gas velocity, (3) added gases in the presence of iron catalysts, (4) the previous treatment of the iron containing solid phase, (5) pressure, (6) carbon itself, (7) carbon deposition on various metals, metallic oxides, and other materials, and (8) influence of cyanogen, ammonia, and hydrogen sulfide.

* PB L 81279. NASH, ROY W. Catalysts for the manufacture of phthalic anhydride and aniline, I. G. Farbenindustrie A. G., Ludwigshafen. (FIAT Final Rept 649) May 1947. 17 p. Price: Mimeo-50¢

This report gives details on the manufacture and use of catalysts in the I. G. Farbenindustrie plant at Ludwigshafen for the production of: (1) phthalic anhydride from naphthalene; and (2) aniline by hydrogen reduction of nitrobenzene. Schematic diagrams of the processes are included.

* PB L 81283. HILL, FREDERICK and LARGENT, RAYMOND. Manufacture of acrylonitrile by addition of hydrocyanic acid to acetylene. (FIAT Final Rept 1125) May 1947. 20 p. Price: Mimeo-50¢

Supplementing previous reports on the subject of the manufacture of acrylonitrile by addition of hydrocyanic acid to acetylene, this report presents additional detailed information on the process successfully engineered by I. G. Farbenindustrie. The development of the important reaction vessel, optimum operating conditions for the reactor and the reasons therefor, present treatment and proposed purification of recycled reactor exit gas, and important operating

details of the distillation and refining of crude acrylonitrile at Leverkusen, are covered in the first section of the report. The second section presents detailed information on equipment design and manufacturing process proposed for new plants and Ludwigshafen and Auschwitz, with projected capacities of 600 tons and 400 tons per month, respectively. These new plants, in the construction stage at the termination of the war, were never completed. Information obtained in the interrogation of personnel directing the laboratory research work undertaken for new plant design is also given. Advantages claimed for the new plants, as compared with the Leverkusen 70-ton per month plant, included manufacture of an acrylonitrile product of very high purity, increased output of acrylonitrile per unit of volume of catalyst solution, and a marked increase in the life of the catalyst solution.

* PB L 81696. WALLER, C. J. Chemische Fabrik Joh. A. Benckiser, G. m. b. H., Ladenburg works. Manufacture of calcium citrate. (BIOS Final Rept 489, Item 22) 1944. 22 p. Price: Microfilm-$1.50 - Photostat-$3.00
The plant is of modern design and the process yields 70% of citric acid based on the sugar content of the raw molasses. There is a complete absence of side reactions during the fermentation process. The report covers the following: (a) description of fermentation process, (b) details of culture growth, (c) disinfecting of fermentation chambers, (d) pretreatment of air, (e) treatment of fermented liquor, (f) details of plant, and (g) services required, personnel health precautions. A flow diagram is attached.

FOOD AND KINDRED PRODUCTS

* PB L 81612. GOETZEL, WALTER. German pea processing and feed manufacturing plant. (BIOS Final Rept 1164, Item 31). Jan 1947. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
This report is a general survey of the feed situation in Germany 1947 for chickens, poultry, hogs and pigeons. The development of the manufacturing of German poultry feed is illustrated by an analysis of the feed which the Mannheimer Schaelmuehle Sievers produced during the war years. Investigation of two flour mills is also included.

PB L 80835. GOSS, W. H. F. Thörl's Vereinigte Harburger Oelfabriken Aktiengesellschaft, Hamburg. Aug 1945. 18 p. Price: Microfilm-$1.00 - Photostat-$2.00
F. Thörl's Vereinigte Harburger Oelfabriken A. G. is one of the largest oilseed mills and vegetable oil refineries in Germany. The manner in which various steps in the process of making finished products from raw materials are conducted in different plants is quite dissimilar to American practice. The report covers the following: (a) pressing plant, (b) extraction plant, (c) recovery of lecithin, (d) refining, (e) reversion of soybean oil, (f) preparation of carotene, (g) industrial proteins, and (h) a few miscellaneous remarks about research and naming of a few interests outside the oil interests.

* PB L 81848. HEWITT, A. G. German synthetic sausage casings industry. (FIAT Final Rept 1118). Jun 1947. 28 p. Price: Mimeo-$0.75
This report covers the various manufacturing processes employed in Germany during the war for the production of thin-wall tubing to be used for synthetic sausage casings. Raw materials and process details are included; equipment is discussed in some detail; and figures for production output and capacity are given. There are drawings of several important pieces of production equipment.

* PB L 79239. WILSON E. P. and LEWIS, F. C. Food preparing machinery. (BIOS Final Rept 1271, Item 31). Oct 1946. 61 p. Price: Microfilm-$2.00 - Photostat-$5.00
This report covers individual report on 25 targets visited in the British zone. In the case of some of the factories dealt with in these reports, merely a brief summary of their products and activities are given. Appendices A to L inclusive consist of sectional drawings of various machines used in food preparation in Germany.

LUMBER AND WOOD PRODUCTS

* PB L 85139. CRUSIUS, CHRISTOPHER C. Production methods of wall board and wood substitute. (FIAT Final Rept 1306). Aug 1947. 21 p. Price: Mimeo-$0.75
This report contains technical data concerning the production methods of special wallboards or fibre material to be used as substitute for a light weight wood of high tensile and compressive strength. The data was collected at the J. M. Voith works in Heidenheim, Württemberg, Germany. Plant layout, drawings and illustrations are included.

PB L 31590-82. FAHLBUSCH. Investigations on the strength of "Holtg Homogenhols." 1944. (Supp 2 to PB 31590, FIAT Final Report 572). Mar 1944. 25 p. Price: Microfilm-$1.00 - Photostat-$2.00
In this report the specific gravity, moisture content, tensile strength and the strength of the hole walls are determined in various types of Holig-Homogenhols. Numerous tables, diagrams and graphs showing the investigation results are attached. This document is a supplement to the report "Resin filled fiberboard of the Holig Homogenhols-Werke" by Winslow and others, PB 31590, an abstract of which appears in volume 2 of the Bibliography on page 964. In German.

PB L 81013. HÄGER, BROR. Impregnation method for "Bolinden." 1945. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
"Bolinden" is a water solution of arsenic acid, sodium arsenate, bichromate and zinc sulfate. It is claimed that 99% of the 130,000 cubic meters of wood treated annually in Sweden is now impregnated with "Bolinden" salts because of the creosote shortage. This article describes the method used; illustrations are included. The article is in Swedish.

PB L 31590-6. HOLIG-HOMOGENHOLZWERKE G.M.B.H., RAIERS-BRONN, GERMANY. Data sheets. (Supp to PB 31590, FIAT Final Report 572). n. d. 24 p. Price: Microfilm-$1.00 - Photostat-$2.00
These graphs of physical properties of the products of the firm supplement the report "Resin filled fiberboard of the Holig Homogenhols-Werke" by Winslow and others, PB 31590, abstracted on page 964 of volume 2 of the Bibliography. Captions are in German.

* PB L 79245. PORTER, P. W. Investigation of targets connected with the manufacture of fibre building boards in Germany. (BIOS Final Rept 989, Item 22). Jun-Jul 1946. 138 p. Price: Microfilm-$3.00 - Photostat-$10.00
This report covers investigation of 12 manufacturing firms with a detailed report of each visit. Appendix 1 to 16 inclusive, consists of reprints of technical data pertaining to the industry, illustrated leaflets and catalogs from manufacturers of equipment and supplies for the trade.

PB L 74637. GOETZENWERKE A. G., BURSCHEID/RHLD., GERMANY. Testing of piston rings, gaskets, and packings. (FIAT Microfilm Reel L-132, Frames 4691-5307) 1938-1944. 617 f. Price: Microfilm-$6.00 - Enlargement print-$62.00

This reel was prepared by FIAT investigators in Germany. 28 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
4691-4697 PB L 74637	Floating connecting rod bushing from a Jumo 211. 1939. In German.	$1.50
4698-4705 PB L 74637	X-ray photographs of a "Freudenberg" and "Götze" Buna shaft packing. 1944. In German.	1.50
4706-4713 PB L 74637	Determining the general operating procedures with the "Metaluskop" x-ray apparatus. 1942. In German.	1.50
4714-4717 PB L 74637	Broken piston ring made of "Brackelsberg" cast. 1938. In German.	1.50
4718-4745 PB L 74637	New research for economical production of brake linings. 1941. In German.	3.00
4746-4752 PB L 74637	Piston ring with light metal insert. 1944. In German.	1.50
4753-4776 PB L 74637	Roentgenographic evaluation of a "Debye-Scherrer"-diagram of antimony. 1943. In German.	2.50
4777-4793 PB L 74637	Sintered wire of silver and iron. 1943. In German.	2.00
4794-4812 PB L 74637	Perfectly sealing "Teves" piston rings and loose "Goetze" piston rings. 1944. In German.	2.00
4813-4817 PB L 74637	Steel piston ring. 1939. In German.	1.50
4818-4831 PB L 74637	Valve seating rings of various materials. 1938. In German.	1.50
4832-4840 PB L 74637	Slip rings of pressed material for water pump packings made of a loose pressed mass. 1940. In German.	1.50
4841-4861 PB L 74637	Pressure gradient and distribution of lubricating oil within the chambers depending on the type and number of packing rings for automatically operating springy ring packings of piston compressors. 1940. In German.	2.50
4862-4869 PB L 74637	Investigating soft graphite rings with regard to strength and hardness depending on the binding agent additive. 1941. In German.	1.50
4870-4881 PB L 74637	Tests for determining the heat stability of spring wire. 1942. In German.	1.50
4882-5062 PB L 74637	Test stand experiments concerned with packings. 1939-1941. In German.	18.00
	"Goetze" pamphlets.	
5063-5084 PB L 74637	Original "Goetze" piston rings. 1938. In German.	2.50
5085-5135 PB L 74637	Piston rings, gaskets, packings, and the "Zafit" anti-friction agent. 1945. In German.	5.50
5136-5149 PB L 74637	Piston ring publication No. 2, 4, 7,8. (n. d.). In German.	1.50
5150-5206 PB L 74637	Piston rings, gaskets, packings. (n. d.). In German.	6.00
5207-5213 PB L 74637	Piston ring publication. (n. d.). In German.	1.50
5214-5225 PB L 74637	Standardized piston rings. (n. d.). In German.	1.50
5226-5235 PB L 74637	"Mola" piston rings. (n. d.). In German.	1.50
5236-5253 PB L 74637	Hot rolling of iron-carbon alloys with over 1.7% carbon, by E. Piwowarsky and A. Wittmoser. (n. d.). In German.	2.00
5254-5266 PB L 74637	Determining the permanent shape modification and tensile strength of piston rings made of sintered metal. First report. (n. d.). In German.	1.50
5267-5270 PB L 74637	Sintering of piston rings. 1944. In German.	1.50
5271-5279 PB L 74637	See frames 5256-5266. Second report. (n. d.). In German.	1.50
5280-5307 PB L 74637	Index of documents at the "Goetzewerke A. G., Burscheid." 1947. In German.	3.00

PB L 74659. GOETZEWERKE, BURSCHEID, GERMANY. Piston rings. (FIAT Microfilm Reel L 130, Frames 3116-3894) 1936 - 1945. 779 f. Price: Microfilm-$6.00 - Enlargement print-$78.00.

This reel was prepared by FIAT investigators in Germany. 21 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
3116-3164 PB L 74659	Influence of radial pressure distribution, tension and thrust on the sealing capacity of piston rings. 1937. In German.	$5.00
3165-3214 PB L 74659	Effect of pressure and thrust on the sealing capacity of piston rings. 1937. In German.	5.00
3215-3247 PB L 74659	Determining the bending strength of airplane piston rings. 1936. In German.	3.50
3248-3260 PB L 74659	Tension tests made at Anolda during the last quarter of 1942. 1943. In German.	1.50
3261-3275 PB L 74659	Investigating the manufacture of Opel rings. 1944. In German.	1.50
3276-3283 PB L 74659	Design and calculation of a new tangential stress scale with direct indication. 1945. In German.	1.50
3284-3554 PB L 74659	Developing suitable piston rings for steel cylinders hardened by nitridation. (Test reports) 1937. In German.	27.50
3555-3604 PB L 74659	Centrifugal casting. 1943. In German.	5.00

3605-3635 PB L 74659 — Manufacture of piston rings based on the hot blast cupola furnace process. 1943. In German. 3.50

3636-3652 PB L 74659 — Melting of piston ring material by Piwowarsky. 1941. In German. 2.00

3653-3665 PB L 74659 — Testing of a melt specimen of the "Giesserei - Institut Aachen." 1941. In German. 1.50

3666-3689 PB L 74659 — Relationship between the oil adsorption capacity and the piston ring material. 1937. In German. 2.50

3690-3710 PB L 74659 — Investigating the resistance to abrasion during a rotating wear and tear test with oil at various temperatures. 1937. In German. 2.50

3711-3727 PB L 74659 — Testing the resistance to abrasion of piston ring material under dry conditions. 1937. In German. 2.00

3728-3739 PB L 74659 — Investigating the effect of the E-modulus on the usual material values of piston ring materials. 1937. In German. 1.50

3740-3770 PB L 74659 — Requirements of a piston ring. 1934. In German. 3.50

3771-3820 PB L 74659 — Testing of 200 piston rings. 1936. In German. 5.50

3821-3860 PB L 74659 — Piston rings for airplane motors. n.d. In German. 4.00

3861-3873 PB L 74659 — Heat bending tests with cast iron. 1942. In German. 1.50

3874-3891 PB L 74659 — Occurrence of spherolithic graphite in technical cast iron. 1938. In German. 2.00

3892-3894 PB L 74659 — Development of piston ring materials. 1936. In German. 1.50

PB L 74661. GOETZEWERK A. G., BURSCHEID, GERMANY. Piston rings, packings and other machine parts. (FIAT Microfilm Reel L 126, Frames 1-772) 1936-1945. 772 f. Prices: Microfilm-$6.00 - Enlargement print-$77.50. This reel was prepared by FIAT investigators in Germany and consists of records of the patent division of the subject firm. 48 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
1-14 PB L 74661	Combined spring system. 1944. In German.	$ 1.50
15-27 PB L 74661	Packing for steam piston. 1942. In German.	1.50
28-83 PB L 74661	Piston ring "F 11". 1942. In German.	6.00
84-139 PB L 74661	Piston ring. 1945. In German.	6.00
140-148 PB L 74661	Unstressed flexible packing ring. 1939. In German.	1.50
149-164 PB L 74661	Piston ring of sintered iron. 1944. In German.	2.00
165-171 PB L 74661	Method for the manufacture of piston rings. 1943. In German.	1.50
172-183 PB L 74661	Method for stressing springy piston rings. 1944. In German.	1.50
184-193 PB L 74661	Radial pressure tester for springy packing rings. 1936. In German.	1.50
194-210 PB L 74661	Valve seat ring. 1938. In German.	2.00
211-322 PB L 74661	Cast iron work pieces with well developed gliding properties for high stresses. 1934-1941. In German.	11.50
323-329 PB L 74661	Piston ring closure for internal combustion engines. 1939. In German.	1.50
330-336 PB L 74661	Bearing for clutches. 1941. In German.	1.50
337-384 PB L 74661	Corrosion and wear and tear phenomena. By A. J. Maurin, 1942. In German.	5.00
385-392 PB L 74661	Machine for automatically cutting rings. 1944. In German.	1.50
393-397 PB L 74661	Locking device for pipe lines. 1944. In German.	1.50
398-402 PB L 74661	Method for manufacturing of cast iron packing rings. 1944. In German.	1.50
403-410 PB L 74661	Cast iron work pieces under wear and tear stresses. 1944. In German.	1.50
411-414 PB L 74661	Method for the manufacture of packing rings. 1944. In German.	1.50
415-417 PB L 74661	Method for producing piston rings of iron carbon alloys. 1944. In German.	1.50
418-423 PB L 74661	High heat-resistant packing. 1944. In German.	1.50
424 PB L 74661	Method for improving non-chipping deformation of metals by drawing. 1945. In German.	1.50
425-429 PB L 74661	Heat resistant packing plate. 1944. In German.	1.50
430-470 PB L 74661	Piston with protective ring for internal combustion engines. 1941. In German.	4.50
471-476 PB L 74661	Method and device for annealing of piston rings in the salt bath furnace. 1942. In German.	1.50
477-480 PB L 74661	Pre-treatment of a packing ring under wear stresses during heating. 1944. In German.	1.50
481-483 PB L 74661	Method for the production of cast iron piston rings. 1944. In German.	1.50
484-489 PB L 74661	Cast iron used for bearings. 1941. In German.	1.50
490-497 PB L 74661	Method for the operation of blast furnaces. 1944. In German.	1.50
498-501 PB L 74661	Extensometer for determining radial pressure. 1944. In German.	1.50
502-520 PB L 74661	Highly stressed piston rings in fast running internal combustion engines. 1944. In German.	2.00
521-548 PB L 74661	Piston tested under friction. 1938. In German.	3.00

Machinery (contd)

549-563 PB L 74661 — Clutch for vehicles. 1940. In German. 1.50

564-568 PB L 74661 — Supercharger shaft packing by means of sealing oil under pressure. 1944. In German. 1.50

569-574 PB L 74661 — Optical device for measuring surface deformations. n.d. In German. 1.50

575-603 PB L 74661 — Testing apparatus for determining wear and tear of parts that move against each other. 1945. In German. 3.00

604-619 PB L 74661 — Protective coating for preventing heat transfer in pipes or containers. 1938. In German. 2.00

620-658 PB L 74661 — Rolled packing ring. 1946. In German. 4.00

659-682 PB L 74661 — Automatically adjusting springy packing. 1942. In German. 2.50

683-697 PB L 74661 — Device for measuring the radial stress of coil springs. 1942. In German. 1.50

695-702 PB L 74661 — Sintered cast iron. 1942. In German. 1.50

703-713 PB L 74661 — Method and device for producing thermally stressed piston rings. 1943. In German. 1.50

714-728 PB L 74661 — Austenite without nickel. 1944. In German. 1.50

729-735 PB L 74661 — Method for the manufacture of piston rings. 1942. In German. 1.50

736-742 PB L 74661 — Cased-in packings. 1943. In German. 1.50

743-758 PB L 74661 — Slip ring packing. 1944. In German. 1.50

759-764 PB L 74661 — "Zafitizing" of briquettes made of sintered iron powder before sintering. 1944. In German. 2.00

765-772 PB L 74661 — Piston ring for internal combustion engines. 1941. In German. 1.50

PB L 74628. GOETZEWERKE A. G., BURSCHEID, GERMANY. Pistons, piston rings, and packings. (FIAT Microfilm Reel L - 127, Frames 773-1558) 1939 - 1945. 786 F. Price: Microfilm-$6.00 - Enlargement print-$79.00
This reel prepared by FIAT investigators in Germany consists mainly of patent applications and design patent applications in the above mentioned field. 50 individual items are listed below and will be available as enlargements prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
773-790 PB L 74628	Method for the production of piston rings. 1944. In German.	$2.00
791-795 PB L 74628	Sealing for pistons of internal combustion engines. 1942. In German.	1.50
796-843 PB L 74628	"Bakelit" running surface. 1941. In German.	5.00
844-850 PB L 74628	Cylinder head gasket. 1943. In German.	1.50
851-871 PB L 74628	Method of manufacturing piston rings having equal tangential stress. 1940. In German.	2.50
872-875 PB L 74628	Primary ferrite for piston rings. 1945. In German.	1.50
876-879 PB L 74628	Piston ring with layer on the running surface. 1944. In German.	1.50
880-898 PB L 74628	Piston ring. 1943. In German.	2.00
899-926 PB L 74628	Method for the manufacture of flat gaskets. 1943. In German.	3.00
927-946 PB L 74628	Piston sealing for internal combustion engines. 1940. In German.	2.00
947-953 PB L 74628	Flange packing. 1944. In German.	1.50
954-961 PB L 74628	Piston rings with graphite. 1944. In German.	1.50
962-972 PB L 74628	Method for the magnetic determination of structure properties. 1944. In German.	1.50
973-978 PB L 74628	Packing ring. 1944. In German.	1.50
979-985 PB L 74628	Shaft packing with housing. 1945. In German.	1.50
986-991 PB L 74628	Lathe with self-tightening lining. 1942. In German.	1.50
992-1008 PB L 74628	Manufacture of synthetic hard rubber "Tickol". 1944. In German.	2.00
1009-1029 PB L 74628	Stressed rings with radial pressure curves. 1940. In German.	2.50
1030-1034 PB L 74628	Piston ring with a light metal surface. 1944. In German.	1.50
1035-1040 PB L 74628	Method for the production of piston rings. 1941. In German.	1.50
1041-1062 PB L 74628	Various piston rings. n.d. In German.	2.50
1063-1068 PB L 74628	Piston ring with plastic insert. n.d. In German.	1.50
1069-1082 PB L 74628	Brake lining. 1944. In German.	1.50
1083-1095 PB L 74628	Objection to patent for a method of manufacturing high stress resistant cast parts e. g. piston rings of grey iron. 1940. In German.	1.50
1096-1105 PB L 74628	Clutch for vehicles. 1939. In German.	1.50
1106-1113 PB L 74628	Flat gasket particularly cylinder head gasket "Columbit". 1944. In German.	1.50
1114-1164 PB L 74628	Cast iron pieces having good gliding properties. 1940. In German.	5.50
1165-1168 PB L 74628	Patent objection to a method for applying an auxiliary layer on internal combustion engine pistons. 1942. In German.	1.50
1169-1245 PB L 74628	Piston ring. 1940. In German.	8.00
1246-1263 PB L 74628	Device for automatic adjustment of a dial indicator. 1944. In German.	2.00

1264-1275 PB L 74628	Method for the production of a self-tightening piston ring sealing consisting of several rings. 1944. In German.	1.50
1276-1278 PB L 74628	Manufacture of objects made of iron-carbon-alloys. 1943. In German.	1.50
1279-1313 PB L 74628	Manufacturing method of highly wear-and-tear resistant piston rings. 1944. In German.	3.50
1314-1321 PB L 74628	Method of measuring the radial stress of coil springs. 1942. In German.	1.50
1322-1325 PB L 74628	Instrument for measuring small angles. 1943. In German.	1.50
1326-1360 PB L 74628	Heat-resistant flat packing. 1941. In German.	3.50
1361-1368 PB L 74628	Electrical measuring method for determining radial pressures. 1943. In German.	1.50
1309-1372 PB L 74628	Packing ring. 1944. In German.	1.50
1373-1385 PB L 74628	Packing plate of soft material. 1943. In German.	1.50
1386-1398 PB L 74628	Packing ring consisting of several corrugated layers. 1941. In German.	1.50
1399-1404 PB L 74628	Piston ring consisting of a pressed mixture of cast iron and carbon. 1944. In German.	1.50
1405-1445 PB L 74628	Non-fibrous flat packing. 1944. In German.	4.50
1446-1466 PB L 74628	Shaft packing for high pressures. 1944. In German.	2.50
1467-1486 PB L 74628	Friction bearing. 1945. In German.	2.00
1487-1493 PB L 74628	Piston ring made of sintered iron. 1944. In German.	1.50
1494-1502 PB L 74628	Flat packing made of sheet metal. 1944. In German.	1.50
1503-1532 PB L 74628	Patent objection with regard to a hardness tester based on the Rockwell method. 1943. In German.	3.00
1533-1541 PB L 74628	Automatically operating spring packing. 1944. In German.	1.50
1542-1550 PB L 74628	Polyurethane used for the manufacture of plastics. 1943. In German.	1.50
1551-1558 PB L 74628	Hot-air stove for blast furnaces. 1944. In German.	1.50

PB L 74619. GOETZEWERK A.G., BURSCHEID, GERMANY.
Testing of piston rings, packings and other machinery parts.
(FIAT Microfilm Reel L 128, Frames 1559-2340) 1936-1945.
782 f. Price: Microfilm-$6.00 - Enlargement print-$78.50.
This reel prepared by FIAT investigators in Germany contains records of the patent department of the subject firm. 54 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
1559-1564 PB L 74619	Shaft packing. 1944. In German.	$ 1.50
1565-1569 PB L 74619	Centering device for piston rings. 1944. In German.	1.50
1570-1574 PB L 74619	Device for emptying of molds. 1944. In German.	1.50
1575-1578 PB L 74619	Shock absorber in clutches. 1939. In German.	1.50
1579-1588 PB L 74619	Springy plate consisting of three or more sheets. 1944. In German.	1.50
1589-1593 PB L 74619	Galvanized piston ring. 1945. In German.	1.50
1594-1612 PB L 74619	"Goetzolin" packing resistant to water, oil, fuel and cooling agents. 1944. In German.	2.00
1613-1623 PB L 74619	Worn piston ring. 1944. In German.	1.50
1624-1629 PB L 74619	Covering for welding rod. 1944. In German.	1.50
1630-1643 PB L 74619	Cementing agent. 1944. In German.	1.50
1644-1651 PB L 74619	Method for stressing springy piston rings of sintered iron. 1944. In German.	1.50
1652-1653 PB L 74619	Sintering of copper, aluminum, etc. 1945. In German.	1.50
1654-1664 PB L 74619	Packing by means of a disc spring. 1945. In German.	1.50
1665-1670 PB L 74619	Packing gland particularly for hot blast valves. 1943. In German.	1.50
1671-1685 PB L 74619	Sealing of joints particularly against high pressure and heat differences. 1944. In German.	1.50
1686-1701 PB L 74619	Cellular ring packing. 1944. In German.	2.00
1702-1757 PB L 74619	Piston for internal combustion engines. 1938. In German.	6.00
1758-1776 PB L 74619	Investigating the heat resistance of piston rings. 1939. In German.	2.00
1777-1790 PB L 74619	Method for the manufacture of piston rings. 1944. In German.	1.50
1791-1809 PB L 74619	Friction bearing. 1944. In German.	2.00
1810-1822 PB L 74619	Device for measuring radial pressure. 1943. In German.	1.50
1823-1831 PB L 74619	Process for producing tension in piston rings. 1944. In German.	1.50
1832-1839 PB L 74619	Device for the manufacture of metal covered packing rings. 1943. In German.	1.50
1840-1841 PB L 74619	Clutch for engines. 1943. In German.	1.50
1842-1858 PB L 74619	Tool for inserting and removing piston rings. 1944. In German.	2.00
1859-1877 PB L 74619	Testing device for shaft packings. 1943. In German.	2.00
1878-1884 PB L 74619	Ball bearing with packing. 1944. In German.	1.50

1885-1888 PB L 74619 — Soft iron for packing rings. 1936. In German. 1.50

1889-1894 PB L 74619 — Method for producing chromium coverings. 1941. In German. 1.50

1895-1923 PB L 74619 — Chemical thermodynamics, kinetics and science of electrochemical properties of the "Zeitschrift für physikalische chemie", Vol. 191. By M Bodenstein, and others. Published by Becker & Erler K.G., Leipsig. 1942. In German. 3.00

1924-1948 PB L 74619 — Plate-like packing with at least one opening. 1941. In German. 2.50

1949-1971 PB L 74619 — Heavy duty gasket, particularly cylinderhead gasket for internal combustion engines. 1943. In German. 2.50

1972-1976 PB L 74619 — Machine part of metal, stressed by a sliding motion. 1943. In German. 1.50

1977-2025 PB L 74619 — Perlite casting. 1943. In German. 5.00

2026-2059 PB L 74619 — Pre-treating method for metallic parts for improving non-chipping deformations. 1943. In German. 3.50

2060-2082 PB L 74619 — Radially moving packing for axle bearings. 1943. In German. 2.50

2083-2129 PB L 74619 — Shaft packing. 1940. In German. 5.00

2130-2138 PB L 74619 — Packing for high pressures. 1942. In German. 1.50

2139-2170 PB L 74619 — "Facit" packing. 1945. In German. 3.50

2171-2191 PB L 74619 — Labyrinth to seal off penetrating liquids. 1943. In German. 2.50

2192-2196 PB L 74619 — Slip ring packing for shafts. 1944. In German. 1.50

2197-2201 PB L 74619 — Bag-like packing. 1937. In German. 1.50

2202-2205 PB L 74619 — Shaft packing. 1942. In German. 1.50

2206-2246 PB L 74619 — Sealing ring. 1941. In German. 4.50

2247-2250 PB L 74619 — Lens shaped packing that adjusts itself to different temperatures. 1943. In German. 1.50

2251-2254 PB L 74619 — Gasketing for flanges, cylinder blocks, etc., consisting of several layers. 1939. In German. 1.50

2255-2261 PB L 74619 — Packing for axles and shafts. 1937. In German. 1.50

2262-2269 PB L 74619 — Bi-metal piston ring. 1942. In German. 1.50

2270-2282 PB L 74619 — Piston with piston sealing. 1944. In German. 1.50

2283-2291 PB L 74619 — Packing particularly for axle bearings. 1941. In German. 1.50

2292-2298 PB L 74619 — Improvement on a stuffing box. 1943. In German. 1.50

2299-2316 PB L 74619 — Shaft packing resistant to high pressure and thermal differences. 1936. In German. 2.00

2317-2334 PB L 74619 — Packing for axle bearing housings. 1943. In German. 2.00

2335-2340 PB L 74619 — Packing ring with light metal surface. 1934. In German. 1.50

PB L 85134. LIST, H. Calculation of flow processes during gas exchange: I. General theoretical (basic theory). (Institute for Internal Combustion Engines Rept 20) Dec 1945. 103 p. Price: Mimeo-$2.75
This is the 20th report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report deals with the development of a method of calculation to investigate the flow processes during gas exchange. This method allows the determination of the velocity and pressure course for any chosen manifold and cylinder arrangement in complete agreement with the actual facts. Fifteen diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

PB L 85131. LIST, H. Investigation into suction manifolds of multi-cylinder carburetor engines. (Institute for Internal Combustion Engines Rept 7) Aug 1945. 41 p. Price: Mimeo-$1.25
This is the seventh report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report deals with the uneven distribution of the fuel in the different cylinders of multi-cylinder carburetor engines. Forty-five diagrams and photographs are included. For a general survey of 42 research reports by this Institute, see PB 85129.

PB L 85133. LIST, H. and BERLIT, G. Loss repartition of the internal combustion engine: IV. Losses due to incomplete and dragging combustion and to heat transfer. (Institute for Internal Combustion Engines Rept 15) Dec 1945. 39 p. Price: Mimeo-$1.00
This is the 15th report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report deals with the determination of partial efficiencies to be ascertained from the thermodynamic analysis of the diagram. It starts with the efficiency of the ideal engine. Then the partial efficiencies caused by imperfect chemical conversion, dragging combustion, and heat transfer are determined. Eleven diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

PB L 85135. REYL, G. Determination by calculation of gas exchange processes: II. Approach method to calculate the flow processes during gas exchange. (Institute for Internal Combustion Engines Rept 21) Dec 1945. 59 p. Price: Mimeo-$1.50
This is the 21st report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report deals with the approach method by Reyl. The effect a cylinder has on a manifold mounted in front of it or behind it, and the effect of the pressure waves in these manifolds on the pressure course in the cylinder is determined. To present the gas oscillations, vector diagrams are used. Sixteen diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

PB L 85136. SCHMIDT, G. Thermodynamics of the gas turbine. (Institute for Internal Combustion Engines Rept 28) Jan 1946. 37 p. Price: Mimeo-$1.00
This is the 28th report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report deals with the gas turbine in flight. The investigation makes no claim to completeness; they were to be the beginning of a planned comprehensive investigation of the thermodynamics of the gas turbine and to give a survey of the fundamental relations. Twenty diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

PB L 73925. TEXTILE MACHINERY. (FIAT Microfilm Reel A 75, Frames 1-286). 1935-1946. 286 f. Price: Microfilm-$3.75 - Enlargement Print-$29.00
This reel consists of shop drawings by different firms manufacturing textile machinery in Germany. Temperature chart of anapron dryer by Friederiek Haas, Lennep, Rheinland. Layout for rayon staple crushing mill by C. G. Haubolt, Chemnitz. Punching and stretching machine, exhaust hood, filtering candle and sectional drawing of a centrifugal spinning machine of Spinnfaser A. G., Kassel. Synopsis of manufacturing procedure by Rheinische Kunstiseide A. G., Ürdingen, Rheinland. Detail drawings of machines made by Erich Kiefer, Berlin-Stuttgart, with a number of photographs. Photo of the Maschinenfabrick Friederick Haas, Lennep, Rheinland. Pamphlet of PIV transmissions by Werner Reiner K. G., Bad Homburg. Automatic cellulose fiber press with detail drawings by Lindemann & Schmitzler, Düsseldorf. "WABAG" filters. Slubbing cutter and feeding machine by the Deutsche Spinnerei-Maschinenbau A. G., Ingolstadt a.D. Synopsis of apparatus and other equipment by Kalle & Co., Wiesbaden, and rubber funels, punching machines, pulp condenser, testing machine, passing centrifuge by Werner & Pfleiderer, Stuttgart. However, most of the frames will not reproduce well.

PB L 85132. WETMANN, W. and others. Loss repartition of the internal combustion engine: II. Losses during mixture preparation. (Institute for Internal Combustion Engines Rept 13) Oct 1945. 48 p. Price: Mimeo-$1.25
This is the 13th report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report deals with: Losses during preparation of the fuel; Losses during conversion of the energy contained in the prepared fuel into heat; and, Losses during conversion of heat into useful power. Six diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

MEDICAL RESEARCH AND PRACTICE, INCLUDING CLINICAL APPLICATION OF DRUGS AND PHARMACEUTICALS

PB M 86323. FIBOR, MARFIELD M. and BLISS, ELEANOR A. Control of infections. Progress report No. 5. Feb 1944. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Thirteen patients suffering from skin infections of various kinds and degrees were subjected to treatment with newer sulfonamides, penicillin, and Dakin solution respectively. Final results are pending. The experiments were carried out by the Committee on Medical Research of the Office of Scientific Research and Development.

* PB M 81639. GOEBEL, H. and SCHAEFER, H. Salt and esterase concentration in the blood in relation to altitude resistance. (FIAT Final Rept 1174) Apr 1947. 7 p. Price: Mimeo-25¢
The potassium and calcium contents and the quotient of the plasma have no influence on the physiological altitude resistance of the human body. Nor does the concentration of blood cholinesterase show any relation to it. There is only a relation between blood pressure and the Ca contents in ascension experiments. In German.

* PB M 81613. HAWKING, F. Tropical medicine at Hamburg and Elberfeld. (BIOS Final Rept 1387, Item 24) Feb 1947. 25 p. Price: Microfilm-$1.50 - Photostat-$3.00
Seven members of the Institut für Schiffs und Tropenkrankheiten, Hamburg and two members of the I. G. Farbenindustrie, Elberfeld, were interviewed concerning work at the two places.

PB M 80799. HOUSEWRIGHT, R. D. and others. The relative effectiveness of purified penicillin fractions against Bacillus anthracis in vitro and in vivo. n. d. 17 p. Price: Microfilm-$1.00 - Photostat-$2.00
The relative activities of penicillins commercial, F, G, K and X are 38, 52, 100, 29 and 160 respectively against Bacillus anthracis in vitro. The relative effectiveness of these same penicillins in protecting mice against experimental anthrax are 100, 80, 100, 40 and 107. The effectiveness of penicillin K against anthrax in mice is greater than its reported effect against streptococcus and pneumococcus infections in mice. The penicillin fractions of choice in treatment of anthrax in mice are penicillins X, G, and F. In general, these results agree with those obtained by other workers on streptococcus and pneumococcus infections in mice and syphilis and gonorrhea in man.

PHOTOGRAPHIC AND OPTICAL GOODS (INCLUDING

PB L 19921. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Patent applications from the Photo and Artificial Silk Patent Division, Wolfen, 1942-1943. (FIAT Microfilm Reel Patents 145) Mar 1946. 988 f. Price: Microfilm-$6.00 - Enlargement print-$99.00
A number of the items included in this film pertain to photographic equipment, emulsions, technique, etc. (color and black-and-white). For abstracts of the film and of the individual papers, see the Section: "Patents: Chemicals and Allied Products" of this issue of the Bibliography.

PB L 73153. LEITZ, ERNST. G.M.B.H., WETZLAR, GERMANY. Calculations for microscope and projection objectives. (FIAT Microfilm Reel I-33, Frames 1902-2774). 1904-1932. 873f. Price: Microfilm-$6.00 - Enlargement print-$87.50.
This FIAT microfilm reel consists of calculations and drawings for microscope and projection objectives and oculars as listed below. Individual items will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
1902-1913 PB L 73153	Apochromat f=16mm. Calculations. 1908. In German.	$1.50
1914-1926 2071-2153 PB L 73153	Apochromat f=2 mm for oil immersions. Calculations and drawings. 1925-1926. In German.	10.00
1927-2070 PB L 73153	Objective "90", f=0, 3065cm. Calculations. 1925-1926. In German.	4.50
2154-2193 PB L 73153	Apochromat f=4 mm for paraffin oil immersion. Calculations and drawing. 1926. In German.	4.00
2194-2250 PB L 73153	Documents pertaining to a camera exchange agreement between Leitz and Hanns Horst, Nurnberg. 1912. In German.	6.00
2251-2450 PB L 73153	Calculations for microscope objective with and without oil immersion, f=2mm. 1904. In German.	20.00
2451-2479 PB L 73153	Ramsden's ocular 10 x for micrometer with a wide angle of view f=27, 26 mm and f=34, 41mm. Calculations. 1909. In German.	3.00

2480-2574 PB L 73153 Minor miniature microscope. Calculations for optics and photographs of the instrument. 1924. In German. 9.50

2575-2593 PB L 73153 Microscope objective for water immersion, 40 x, f=4.2mm. Calculations. 1932. In German. 2.00

2594-2612 PB L 73153 Metallographic objectives, 100 x f=2,5 mm, a=1,30. Calculations. 1932. In German. 2.00

2613-2641 PB L 73153 Microscope objective A.J.M. 3, 90 x, f=2,8mm, a=1,32. Calculations and drawings. 1932. In German. 3.00

2642-2681 PB L 73153 Orthoscopic ocular according to Kellner, f=25mm. Calculations. 1908. In German. 4.00

2682-2739 PB L 73153 Objective for methylene - iodide immersion, a=1.60, 127 X. Calculations and drawing. 1930. In German. 6.00

2740-2754 PB L 73153 Triplet for film projection with Huyghensian ocular, 4x. Calculations. 1929. In German. 1.50

2755-2771 PB L 73153 School microscope table of interchangeable lenses, description and Leitz pamphlets. 1927. In German. 2.00

2772-2774 PB L 73153 Objective composed of three separable members, f=8.29mm, f=11,52mm and f=24.17mm. Drawing and data. n.d. In German. 1.50

PB L 73156. LEITZ, ERNST G.M.B.H., WETZLAR, GERMANY. Calculations and drawings for microscope and other objectives. (FIAT Microfilm Reel I 36, Frames 4462-5523) 1898-1932. 1062 f. Price: Microfilm-$6.00 - Enlargement print-$106.50. This FIAT microfilm reel consists of calculations and drawings for microscope objectives and eyepieces, including articles dealing with microscopy and allied subjects. Individual items are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
4462-4522 PB L 73156	Objective f=4.0 mm, A=0.68. Calculations and drawings. 1914. In German.	$ 6.50
4523-4529 PB L 73156	Photographs of cast iron sections made by Achromat 4, Periplan 8x, diaphragm 1 mm and the same achromat with diaphragm 2 mm. n.d. In German.	1.50
4530-4535 PB L 73156	Apochromat f=2 mm. Drawing, data and calculations. 1923. In German.	1.50
4536-4546 PB L 73156	Substitution apochromat f=16 mm, 11x. Calculations. 1921. In German.	1.50
4547-4633 PB L 73156	Apochromat f=2 mm. Calculations and drawing. 1903. In German.	9.00
4634-4679 PB L 73156	Ramsden type achromatic oculars f=59.19 mm. 3x, 10x and 15x. Calculation. 1929. In German.	5.00
4680-4771 PB L 73156	Microscope optics for trichinoscope objective f=30,1 mm, Ramsden's ocular 12x. Calculations. 1932. In German. Includes an article on a new Zeiss trichinoscope projection apparatus reprinted from the "Berliner Tierärztliche Rundschau" No.44, 1932.	9.50
4772-4793 PB L 73156	Cassia oil immersion objective. Drawing and calculations. 1903. In German.	2.50
4794-4809 PB L 73156	Achromat 1". Aplanatic loupe 6x. Calculations. 1907. In German.	2.00
4810-4858 PB L 73156	UO objective 35x, dry, for water and oil immersion. Drawings and calculations. 1933. In German.	5.00
4859-4881 PB L 73156	Apochromat 45x, f=4 mm, A=0.95. Drawing and calculations. n.d. In German.	2.50
4882-4908 PB L 73156	Apochromat 27.5x, f=8 mm, A=0.68. Drawing and calculations. n. d. In German.	3.00
4909-4959 PB L 73156	Indicator eyepiece 1909/1910. Drawing, description and calculations. 1911. In German.	5.50
4960-5020 PB L 73156	Fluorite objective 1/12 with two fluorite lenses. Drawings and calculations. 1902. In German.	6.50
5021-5125 PB L 73156	Fluorite objective 1/10, developed from objective 1/12. Drawings and calculations. 1909. In German.	1.50
5126-5204 PB L 73156	Photographic objective consisting of two triplets, f=217 mm. Drawings and calculations. 1898. In German.	8.00
5206-5249 PB L 73156	Microscope objective for oil immersion, f=3 mm. Drawing and calculations. 1931. In German.	4.50
5250-5265 PB L 73156	Calculation of the error in reading the meniscus in pipettes when directly under the lens. Article and calculations. 1908. In German.	2.00
5266-5275 PB L 73156	Abbe's test plate for examination of the spherical and chromatic aberration of microscope objectives. Article published by the Carl Zeiss, Jena optical works. 1929. In German.	1.50
5276-5318 PB L 73156	Zeiss paraboloid condenser. Notes and Leitz articles on a reflex condenser for dark-field observation of living micro organisms. 1929. In German.	4.50
5319-5389 PB L 73156	Anastigmat f=400 mm for megascopic projection. Drawings and calculations. 1901. In German.	7.50
5390-5453 PB L 73156	Fluorite apochromat. Drawings and calculations. 1905. In German.	6.50
5454-5523 PB L 73156	Microscope objective 9a, f=2.16 mm. Data, drawings and calculations. 1903. In German.	7.00

PB L 73160. LEITZ, ERNST, G.M.B.H., WETZLAR, GERMANY. Calculations and drawings for microscope objectives and other lenses. (FIAT Microfilm Reel I 40, Frames 8452-9650) 1904-1933. 1199 f. Price: Microfilm-$6.00 - Enlargement print-$120.00
This FIAT microfilm reel consists of calculations and drawings for microscope and projection objectives, loupes, condensers, etc., and Leitz pamphlets on microscopes and microscope tubes. Individual items are listed below and will be available as enlargement prints only; the entire reel may be

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purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
8452-8558 PB L 73160	Objective U.O., 90x, for water immersion. Calculations. 1932. In German. This is a continuation of Reel I 39, PB 73159.	1.50
8559-8632 PB L 73160	Objective 6, apochromat f=4 mm. Drawings and calculations. n.d. In German.	7.50
8633-8654 PB L 73160	Binocular loupe with inclined viewer, 8x, 12x and 18x, f=31.25 mm, f=20.83 mm and f=13.9 mm. Drawing and calculations. 1933. In German.	2.00
8655-8694 PB L 73160	Leitz prospectus for binocular loupes and stereo-microscopes. n.d. In German.	4.00
8695 PB L 73160	Zeiss binocular loupe 8x with Ramsden's ocular. Drawing and data. n. d. In German.	1.50
8696-8833 PB L 73160	Objective for oil immersion 1/7, f=3.43 mm. A=1.00. Drawings and calculations. 1914. In German.	14.00
8834-8872 PB L 73160	Objective 4, achromat 20x, f=9.00 mm. A=0.45. Drawing and calculations. 1926. In German.	4.00
8873-8935 PB L 73160	Apparatus for eardrum examination. Drawings, description, calculations and correspondence. 1911. In German.	6.50
8936-9002 PB L 73160	Optics for profile drawing apparatus. Drawings, data and calculations. n. d. In German.	8.00
9003-9023 PB L 73160	Objective for water immersion, 90x f=2.07 A=1.20. Drawings and calculations. 1908. In German.	2.50
9024-9095 PB L 73160	Achromatic objective 4, f=9.7 mm, A=0.40. Drawing and calculations. 1922. In German.	7.50
9096-9175 PB L 73160	Achromatic objective 4a, f=12,6 mm. Drawing and calculations. 1904. In German.	8.00
9176-9269 PB L 73160	Metallic sections and other microphotographs taken with objective 5 with Huyghenian ocular 8x. Also calculations. 1927. In German.	9.50
9270-9399 PB L 73160	Achromatic objective 6 without cover glass f=4 mm, A=0.78. Calculations and drawings. 1904 and 1917. In German.	13.00
9400-9405 PB L 73160	Projection objective f=39.5 mm and 20.4 mm. Drawings and calculations. 1926. In German.	1.50
9406-9463 PB L 73160	Prism attachment for binocular microscope according to Metz. Drawings and calculations. 1925. In German.	6.00
9464-9507 PB L 73160	Apochromat 62x, f=2.96 mm A=0.95. Drawing and calculations. 1929. In German.	4.50
9508-9530 PB L 73160	Aplanatic condenser A=1,4. Drawing and calculations. 1922. In German.	2.50
9531-9539 PB L 73160	Microscope tube with viewer inclined 30°, 100x. Drawings and calculations. 1933. In German.	1.50
9540-9548 PB L 73160	Leitz prospectus for microscope tubes. n. d. In German.	1.50
9550-9569 PB L 73160	Reading microscope. Drawings and calculations. 1915. In German.	2.00
9570-9606 PB L 73160	Objective 3 TK, 3.5x and 10x. Drawing and calculations. 1931. In German.	4.00
9606-9650 PB L 73160	Prospectus for Leitz microscopes with large angle of view. 1930. In German.	4.50

PB L 73157. LEITZ, ERNST, G.M.B.H., WETZLAR, GERMANY. Calculations and drawings for objectives and loupes, etc. (FIAT Microfilm Reel I 37, Frames 5524-6537) 1898-1934. 1014 f. Price: Microfilm-$6.00 - Enlargement print-$101.50.

This FIAT microfilm reel consists of calculations and drawings for objectives, loupes, condensers and optical systems as listed below. Individual items will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
5524-5593 PB L 73157	Fluorite objective 3 (Apochromat 3). f=15.5 mm. A=0.26. Drawings and calculations. 1913. In German.	$ 7.00
5594-5615 PB L 73157	Reading loupe for apertometer. 6x, f=55 mm. Drawing and calculations. 1929. In German.	2.50
5616-5742 PB L 73157	Drawings and data on objectives. 1898-1902. In German.	13.00
5743-5772 PB L 73157	Sighting device. Description, drawings, formulas and calculations. 1915. In German.	3.00
5773-5797 PB L 73157	Formulas for the calculation of spherical aberration. 1906. In German.	2.50
5798-5880 PB L 73157	Five-digit logarithmic tables. 1906. In German.	8.50
5881-5883 PB L 73157	Telecobjective for Makam. f=246.3 mm. Drawings. n. d. In German.	1.50
5884-5928 PB L 73157	Tube with inclined viewer. Drawings and calculations. 1934. In German.	4.50
5928-5930 PB L 73157	Achromat 6 and achromat 3. Drawings and data. 1934. In German.	1.50
5931-5942 PB L 73157	Data and drawings for U.Q objectives from 3.8x to 100x, also for water and oil immersion. 1934. In German.	1.50
5943-6010 PB L 73157	Fluorite objective Bak 1. f=16 mm. Drawing and calculations. 1934. In German.	7.00
6011-6089 PB L 73157	Objective according to Greenough f=48 mm. 2.7x. Drawings and calculations. n. d. In German.	8.00
6090-6129 PB L 73157	New Greenough objective, 12x. Drawings and calculations. 1925. In German.	4.00

6130-6157 PB L 73157 — Tables for enlargement and angles of view of binocular microscope with various objectives and oculars. n. d. In German. 3.00

6158-6164 PB L 73157 — Wide-angle apochromat f=20 mm. Drawing and calculations. 1934. In German. 1.50

6165-6262 PB L 73157 — Objective for oil immersion 1/12, f=2.0 mm. A 1.2. Drawings and calculations. 1924. In German. 10.00

6263-6388 PB L 73157 — Achromatic objective 1K., 3.2x f=23.65 mm. Drawing and calculations. 1926. In German. 13.00

6389-6453 PB L 73157 — Periplanatic objective f=42.8 mm. Calculations and drawings. 1915-1916. In German. 6.50

6454-6537 PB L 73157 — Condenser for mineralogical microscope, A=1.00 to 1.45, f=10 mm. Drawings, data and calculations, 1911-1912 and 1917. In German. 8.50

PB L 73154. LEITZ, ERNST, G.M.B.H., WETZLAR, GERMANY. Calculations and drawings for objectives, loupes and condensers. (FIAT Microfilm Reel I 34, Frames 2776-3719) 1896-1945. 944 f. Price: Microfilm-$6.00 - Enlargement print-$94.50.
This FIAT microfilm reel consists of drawings and calculations for microscope objectives, loupes and condensers as listed below. Individual items will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
2776-2785 PB L 73154	Triplet, each member of which can be used as a separate objective. Calculations. n.d. In German. This is a continuation of Reel I-33, PB L 73153.	$ 1.50
2786-2787 PB L 73154	Condenser for film projection apparatus Xb. Data, drawing and formulas. 1927. In German.	1.50
2788-2863 PB L 73154	Objective for trichinoscope projection apparatus. Drawings and calculations. n. d. In German.	8.00
2864-2868 PB L 73154	Reprint of an article on trichinoscope projection in stockyards published in the "Deutsche Schlacht- und Viehhof-Zeitung," Vol. 26, 1911. In German.	1.50
2869-2903 PB L 73154	Achromat 3b, 14x f=13.25 mm, A=0.40. Drawing and calculations. 1927 and 1936. In German.	3.50
2904-2913 PB L 73154	Apochromat 3F, 10x. Drawing and calculations. 1921. Produced 1931. In German.	1.50
2914-2950 PB L 73154	Achromat 2b, 8x f=20 mm. Drawing and calculations. 1921. In German.	4.00
2951-2962 PB L 73154	Achromat 1b, 4.2x f=31.72 mm, A=0.15. Drawing and calculations. 1921. In German.	1.50
2963-2983 PB L 73154	Achromat 6, 45x f=4.0 mm, A=0.85. Drawing and calculations. 1921. In German.	2.50
2984-3035 PB L 73154	Binocular loupe. 3 1/2x to 14x. Calculations. Checked 1945. In German.	5.50
3036-3093 PB L 73154	Pfeiffer loupes, 20x, 40x and 85x. Calculations. 1912. In German.	6.00
3094-3189 PB L 73154	Large condenser 2. Drawings and calculations. 1908. In German.	10.00
3190-3247 PB L 73154	Scotch objectives. Calculations. 1896. In German.	6.00
3248-3292 PB L 73154	Achromat for oil immersion, f=3.4 mm. A=1.00. Drawing and calculations. 1922. In German.	4.50
3293-3304 PB L 73154	Achromat 8 without fluorite lens f=2.5 mm, A=0.87. Drawings and calculations. 1920. In German.	1.50
3305-3352 PB L 73154	Achromat for oil immersion 12.6x f=16 mm. A=0.25. Drawing and calculations. 1924. In German.	5.00
3353-3380 PB L 73154	Achromat for oil immersion 25x, f=8 mm, A=0.85. Drawing and calculations. 1924. In German.	3.00
3381-3394 PB L 73154	Achromat 2, 5.8x f=24.4 mm, A=0.18. Drawing and calculations. 1926. In German.	1.50
3395-3497 PB L 73154	Fluorite objective 6aa with two fluorite lenses. Calculations. 1913. In German.	1.50
3498-3518 PB L 73154	Fluorite objective 7a. 60,8x f=3.23 mm. Drawing and calculations. 1908. In German.	2.50
3519-3559 PB L 73154	Fluorite objective 8a. 70x, f=2.65 mm A=0.90. Drawing and calculations. 1929. In German.	4.50
3560-3569 PB L 73154	Fluorite objective for oil immersion 1/16a f=1.64 mm. A=1.32. Drawing and calculations. 1908. In German.	1.50
3570-3633 PB L 73154	Fluorite objective for oil immersion 1/12a. 95x, f=1.93 mm, A=1.32. Drawing and calculations. 1927. In German.	7.50
3634-3651 PB L 73154	Fluorite objective for oil immersion 1/10a. 71.7x, f=2.6 mm. A=1.33. Drawing and calculations. 1921. In German.	2.00
3652-3668 PB L 73154	Fluorite objective for oil immersion 9a 86.7x f=2.1 mm. A=0.90. Drawing and calculations. n. d. In German.	2.00
3669-3719 PB L 73154	Achromat for oil immersion 1/12, 90x, f=2.0 mm. A=1.25. Calculations. 1934. In German.	5.50

PB L 73152. LEITZ, ERNST, G. M. B. H., WETZLAR, GERMANY. Drawings for microscopes, projection apparatus and allied optical instruments. (FIAT Microfilm Reel I-32, Frames 1296-1898). 1934-1943. 603 f. Price: Microfilm-$6.00 - Enlargement print-$60.50
This FIAT microfilm reel consists of drawings for microscopes, projection and drawing apparatus and allied optical instruments and their accessories. Individual items are listed below and will be available as enlargement prints only: the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German. Many frames are indistinct or illegible.

Frames	Title	Price
1296-1311 PB L 73152	Concrete comparison microscope. Drawings. Illegible. In German.	$2.00
1312-1334 PB L 73152	Workshop microscope. Drawings. 1942. Some frames will not reproduce well. In German.	2.50
1335-1343 PB L 73152	Measuring microscope with intermediate image. Drawings. 1942. In German.	1.50
1344-1347 PB L 73152	Simple measuring microscope. Drawings. 1942. In German.	1.50
1348-1350 PB L 73152	Goniometer eyepiece. Drawings. 1936. In German.	1.50
1351-1353 PB L 73152	Projection apparatus. Drawings. Will not reproduce well. In German.	1.50
1354-1360 PB L 73152	Measuring microscope for use with machine tools. Drawings. 1937. In German.	1.50
1361-1363 PB L 73152	Horizontal comparison microscope. Drawings. 1937. Illegible. In German.	1.50
1364-1368 PB L 73152	Profile measuring microscope. Drawings. 1936. In German.	1.50
1369 PB L 73152	Simple goniometric ocular. Drawing. 1935. In German.	1.50
1370-1376 PB L 73152	Centering device for workshop microscope. Drawings. 1943. In German.	1.50
1377-1382 PB L 73152	Measuring microscope with 10 mm displacement. Drawings. 1937. Indistinct. In German.	1.50
1383-1384 PB L 73152	Microscope for precision grinding machine. Drawings. 1941. In German.	1.50
1385-1413 PB L 73152	Accessories for workshop microscope. Drawings. 1936-1941. Indistinct. In German.	3.00
1414-1419 PB L 73152	Reading microscope for workshop use. Drawings. 1941. In German.	1.50
1420-1424 PB L 73152	Surface examination microscope. Drawings. 1937. In German.	1.50
1425-1427 PB L 73152	Projection equipment for Brinell hardness tester. Drawings. 1937. In German.	1.50
1428-1433 PB L 73152	Measuring microscope for grinding machines. Drawings. 1940. Some frames illegible. In German.	1.50
1434 PB L 73152	Motor drive for workshop microscope. Drawing. Indistinct. In German.	1.50
1435-1445 PB L 73152	Profile microscope Model IIa. Drawings. 1943. In German.	1.50
1446 PB L 73152	Simple measuring microscope for use with machine tools. Drawing. 1937. In German.	1.50
1447-1449 PB L 73152	Simple measuring microscope, 25 x 25 mm. Drawings. 1937. Partly indistinct. In German.	1.50
1450-1452 PB L 73152	Comparison microscope for surface examination. Drawings. Indistinct. In German.	1.50
1453-1455 PB L 73152	Tiltable measuring microscope for use with machine tools. Drawing. 1936. In German.	1.50
1456-1459 PB L 73152	Rotary mechanical stage, 360°. Drawings. 1936. In German.	1.50
1460-1464 PB L 73152	Focusing microscope for "Vomag". Drawings. 1939. In German.	1.50
1465-1475 PB L 73152	Plane table 150 x 150 cm. Drawings. In distinct. In German.	1.50
1476-1490 PB L 73152	Reading microscope with precision eyepeice. Drawings. 1937. Partly indistinct. In German.	1.50
1491-1498 PB L 73152	Projection equipment for goniometric oculars. 1939. In German.	1.50
1499-1512 PB L 73152	Plane table with glass ruler. Drawings. 1941. Some frames may not reproduce well. In German.	1.50
1513-1514 PB L 73152	Graduated scale for comparison microscope "Strassmann". Drawings. 1942. In German.	1.50
1515-1521 PB L 73152	Center punch. Drawings. Indistinct. In German.	1.50
1522-1526 PB L 73152	Illumination equipment for plane table with glass ruler. Drawings. 1940. Partly indistinct. In German.	1.50
1527-1532 PB L 73152	Profile projection equipment for plane table. Drawings. 1942. In German.	1.50
1533-1537 PB L 73152	Measuring microscope for use with tooling machines. Model 1941. Drawings. 1942. In German.	1.50
1538-1546 PB L 73152	Reading microscope with precision eyepiece. Drawings. 1941. In German.	1.50
1547-1548 PB L 73152	Collimator f= 600 mm. Drawings. 1942. In German.	1.50
1549 PB L 73152	Illumination equipment for workshop microscope. Drawing. 1942. In German.	1.50
1550 PB L 73152	Nosepiece revolver for microscope used with machine tools. Drawing. 1942. In German.	1.50
1551-1554 PB L 73152	Goniometric eyepiece. Drawings. 1942. In German.	1.50
1555-1576 PB L 73152	Microscope for surface examination, Forster model. Drawings. 1943. In German.	2.50
1577-1578 PB L 73152	Measuring microscope for Schmidt and Schaud. Drawings. 1943. In German.	1.50
1579-1599 PB L 73152	Measuring microscope for machine tools. Drawings. 1936. Some indistinct frames. In German.	2.50
1600-1613 PB L 73152	"St. P." Drawings. Indistinct. In German.	1.50
1614-1636 PB L 73152	Large comparison microscope. Drawings. 1935. In German.	2.50
1637 PB L 73152	Precision measuring eyepiece. Drawing. 1943. In German.	1.50
1638-1639 PB L 73152	Base slide microtome. Drawings. 1935. In German.	1.50
1640-1649 PB L 73152	Large base slide microtome. Drawings. 1935. In German.	1.50
1650-1693 PB L 73152	Microtomes for various purposes. Drawings. 1935-1937. Some frames may not reproduce well. In German.	4.50
1694-1699 PB L 73152	Large plane table. Drawings. 1937. In German.	1.50
1700-1712 PB L 73152	Profile projection and drawing apparatus. Drawings. 1939. In German.	1.50

1713-1715 PB L 73152 Simple plane table. Drawings. 1938. In German. 1.50

1716-1728 PB L 73152 Arc lamp for large profile projection and drawing apparatus. Drawings. 1937 (?) Indistinct. In German. 1.50

1729-1731 PB L 73152 Gear wheel projection equipment. Drawings. 1935. In German. 1.50

1732-1734 PB L 73152 Coordinate table for profile projection apparatus. Indistinct. In German. 1.50

1735-1738 PB L 73152 Coordinate table for workshop microscope. Drawings. 1937. In German. 1.50

1739-1743 PB L 73152 Large diagonal table for profile projection apparatus. Drawings. 1934. In German. 1.50

1744 PB L 73152 Spinning nozzle testing apparatus for Panphot equipment. Drawing. 1940. Indistinct. In German. 1.50

1745-1766 PB L 73152 Focusing screen profile projection apparatus. Drawings. 1938. In German. 2.50

1767-1774 PB L 73152 Movable drawing table for profile drawing apparatus. Drawings. 1938. In German. 1.50

1775-1779 PB L 73152 Equipment for cutting edge examination. Drawings. 1937. In German. 1.50

1780-1781 PB L 73152 Plane table model 30B. Drawings. 1938. In German. 1.50

1782-1794 PB L 73152 Stand for focusing screen projection apparatus. Drawings. 1937. In German. 1.50

1795-1834 PB L 73152 Post office projection apparatus. Drawings. 1936. In German. 4.00

1835-1842 PB L 73152 "Kolm" projection apparatus. Drawings. 1935. Some frames indistinct. In German. 1.50

1843-1880 PB L 73152 Telephone call counting stand for Katowice and Krol. Huta. Drawings. 1933. Many frames illegible. In German. 4.00

1881-1885 PB L 73152 Diving bell for 10 meter-film Leica camera. Drawings. 1943. In German. 1.50

1886-1888 PB L 73152 Reflex optics. Drawings. 1943. In German. 1.50

1889-1892 PB L 73152 Electric furnace for dilatometers. Drawings. 1938. In German. 1.50

1893-1894 PB L 73152 Projectile turning apparatus. Drawings. 1936. In German. 1.50

1895 PB L 73152 Polarization curves. Diagram. nd. In German. 1.50

1896-1898 PB L 73152 Curves showing focusing precision of Leitz and Zeiss microscopes. 1941. In German. 1.50

PB L 73150. LEITZ, ERNST, G. M. B. H., WETZLAR, GERMANY. Parts lists and drawings for dilatometers, microscopes, projection apparatus, etc. (FIAT Microfilm Reel I 30, Frames 4-937). 1921-1946 934f. Price: Microfilm-$6.00 - Enlargement-$93.50
This FIAT microfilm reel consists of parts lists and drawings for dilatometers and accessories, projection apparatus microscopes etc. and electrical equipment for various optical instruments. Individual items are listed below and will be available as enlargement prints only: the entire reel may be pruchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items for this microfilm reel. In German.

Frames	Title	Price
4-21 PB L 73150	Equipment for testing photographic plates and films. Drawings and parts list. 1935. In German	$2.00
22-38 PB L 73150	Correspondence between Ernst Leitz G.m.b.H. and Hartman and Braun A.G. Frankfurt-Main in regard to the optics for a dilatometer. 1930. In German	2.00
39-46 PB L 73150	Cross-hair collimator. Parts list and drawings. 1935. In German	1.50
47-57 PB L 73150	Electric furnace for a dilatometer. Parts list and drawings. 1931. In German.	1.50
58-65 PB L 73150	Intermediate chamber. 420 x 420 mm. Parts list and drawings. 1938. In German.	1.50
66-69 PB L 73150	Large projection cassette 420 x 420 mm. Parts list and drawings. 1931. In German.	1.50
70-123 PB L 73150	Expansion calibrating device for dilatometer UDDA. Parts lists and drawings. 1935. In German.	5.50
124-163 PB L 73150	Heating microscope with photographic registration. Parts list and drawings. 1940. In German.	4.00
164-245 PB L 73150	Furnace for heating rare metals up to 1600°C. Parts list and drawings. 1933. In German.	8.50
246-269 PB L 73150	Profile testing apparatus. Drawings. 1934. In German.	2.50
270-287 PB L 73150	Dilatometer for subjective observation. Drawings. 1940. In German.	2.00
288-299 PB L 73150	Profilm projection apparatus. Parts list and drawings. 1934. In German.	1.50
300-305 PB L 73150	Dilatometers "HV" and "H". Parts and drawings. 1935. In German.	1.50
306-413 PB L 73150	Dilatometer H.T.V.E. Drawings. 1941 1942. In German.	11.00
414-420 PB L 73150	Electric furnace for dilatometer. Parts list and drawings. 1934. In German.	1.50
421-451 PB L 73150	Time registration drum for dilatometers. Parts list and drawings. 1935. In German.	3.50
452-469 PB L 73150	Electromagnetic device for time registration. Parts list and drawings. 1935. In German.	2.00
470-475 PB L 73150	"Heraeus" rare metal furnace for dilatometers. Parts list and drawings. 1938. In German.	1.50
476-488 PB L 73150	Vacuum and low-temperature control arrangement for dilatometers UDDA and H.T.V.E. Drawings. 1939. In German.	1.50
489-503 PB L 73150	Illumination arrangement for gear test stand. Drawings. 1939. In German.	1.50
504-535 PB L 73150	Projection apparatus for scale testing. Parts list and drawings. 1940. In German.	3.50
536-566 PB L 73150	Bacteriological microscope. Drawings. 1941. In German.	3.50

567-593 PB L 73150 Leucocyte counting apparatus. Drawings. 1941. In German. 3.00

594-604 PB L 73150 Standard Profilux projection apparatus. Drawings. 1943. In German. 1.50

605-631 PB L 73150 Focimeter. Drawings and parts list. 1937. In German. 3.00

632-635 PB L 73150 Standard Leitz instrument plates. Drawings. 1929. In German. 1.50

634-715 PB L 73150 Leica shutter testing equipment. Drawings and parts list. 1946. In German. 8.50

716-745 PB L 73150 Focal plane shutter testing equipment. Drawings. 1946. In German. 3.00

746-757 PB L 73150 Dividing machine. Drawings. 1921. In German. 1.50

758-766 PB L 73150 Cone cutters. Drawings. 1923. In German. 1.50

767-769 PB L 73150 Knurling attachments for the index automat. Drawings. 1929. In German. 1.50

770 PB L 73150 Transformer 110 and 220 volt. Drawing. 1930. In German. 1.50

771-789 PB L 73150 Transformer for a 12 volt 100 watt lamp. Drawings. 1942. In German. 2.00

790-793 PB L 73150 Choke for sodium vapor lamp. Drawings. 1940. In German. 1.50

794-798 PB L 73150 Transformer for special Leitz lamp 6 volt 5 amp. Drawings and parts list. 1939. In German. 1.50

799-805 PB L 73150 Choke for mercury lamp Q 300. Drawings. 1940. In German. 1.50

806-815 PB L 73150 Transformer for surface testing microscope. 1941. In German. 1.50

816-825 PB L 73150 Transformer for special Leitz lamp 8 volt 0.6 amp. Parts list and drawings. 1941. In German. 1.50

826 PB L 73150 Transformer for heating table "Meygand". Drawing. 1944. In German. 1.50

827-937 PB L 73150 Electrical equipment for Mignon lamp. Drawings. 1938. In German. 11.50

PB L 73162. LEITZ, ERNST, G.M.B.H., WETZLAR, GERMANY. Articles on optical topics and calculations and drawings for lenses and optical systems. (FIAT Microfilm Reel I-42, Frames 1010 - 2348) 1891-1932. 1339 F. Price: Microfilm-$6.00 - Enlargement print-$134.00. This FIAT microfilm reel consists of a number of articles on optical topics and calculations and drawings for microscope objectives, oculars and whole systems, photographic and other objectives and prisms as listed below. Individual items will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
1010-1132 PB L 73162	(Continued from Reel I-41 - PB 73161) Photographic objectives - Experimental calculations. F=109.6 mm. Drawings. n. d. In German.	$2.50
1133-1137 PB L 73162	Dark-field condensers. Drawings and data. 1928. In German.	1.50
1138-1164 PB L 73162	Objective for heating microscopes. Drawing, calculations and Leitz pamphlet on heating microscopes. 1926. In German.	3.00
1165-1187 PB L 73162	Reprint of an article by E. Lihotzky on microscopes and double oculars for binocular and stereoscopic observation published in the "Zeitschrift für wissenschaftliche mikroskopie and mikroskopische Technik" Vol. 41. 1924. In German.	2.50
1188-1198 PB L 73162	Reprint of an article by E. Lihotzky on the compensation for errors caused by faulty cover glasses published in the "Zeitschrift für wissenschaftliche mikroskopie und mikroskopische Technik." Vol. 46. 1929. In German.	1.50
1199-1204 PB L 73162	Reprint of an article by E. A. Hauser on recent developments in the field of microscopy and its technical application especially in the rubber industry published in the periodical "Kautschuk." Sep 1931. In German.	1.50
1205-1223 PB L 73162	Article by E. Lihotzky on the astigmatism and curvature of aplanatic optical system with large aperture reprinted from the "Zeitschrift für wissenschaftliche mikroskopie und mikroscopische Technik." Vol. 49. 1932. In German.	2.00
1224-1229 PB L 73162	Article by E. Lihotzky on general consideration concerning the illumination in microscopy. n.d. In German.	1.50
1230-1241 PB L 73162	Objective f=8. 9 mm. 36. 9x. Calculations and drawing. 1894. In German.	1.50
1242-1263 PB L 73162	System IV, f=10 mm, A=0. 50. Calculations and drawing. 1891. In German.	2.50
1264-1274 PB L 73162	Pantachromat f=6. 6 mm, A=0.60. Calculations and drawing. 1893. In German.	1.50
1275-1285 PB L 73162	Focusing loupe with Ramsden's ocular. Calculations and drawing. 1927. In German.	1.50
1286-1302 PB L 73162	Objective 5, drawings and calculations. n.d. In German.	2.00
1303-1348 PB L 73162	Apochromat 3a, f=14. 0 mm. Calculations and drawings. 1917. In German.	5.00
1349-1410 PB L 73162	Simple achromatic Dutch telescope 2. 6x. Drawings and calculations. 1905. In German.	6.50
1411-1414 PB L 73162	Zeiss objective for glycerine immersion, f=2. 5 mm, A=0. 85. Calculations and drawing. 1914. In German.	1.50
1415-1426 PB L 73162	Periplanatic objective Z 210. Drawings and calculations. 1899. In German.	1.50
1427-1442 PB L 73162	Periplanatic objective 1. f=210 mm. Calculations and drawings. 1898. In German.	2.00
1443-1510 PB L 73162	Periplanatic objective 1/7, according to German Patent 110449. f=1.9.0 mm. Drawing and calculations. 1903. In German.	7.00
1511-1520 PB L 73162	Steinheil "Antiplanet" f=205.0 mm objective. Calculations. 1908. In German.	1.50
1521-1540 PB L 73162	Objective 1/12 with two fluorite lenses, f=1. 85 m. Drawing and calculations. 1908. In German.	2.00

1541-1553 PB L 73162 — Apochromat f=3 mm. A=0.93. Drawing and calculations. 1908. In German. 1.50

1554-1577 PB L 73162 — Ocular II with objective 10 for water immersion. Drawings and calculations. 1908 and 1917. In German. 2.50

1578-1593 PB L 73162 — Telescope objective f=237.3 mm. Calculations. 1903. In German. 2.00

1594-1609 PB L 73162 — Straight-sight prism. Calculations and notes for a patent application. 1904. In German. 2.00

1610-1626 PB L 73162 — Liquid prisms for large dispersion. Drawings and data. 1903. In German. 2.00

1627-1636 PB L 73162 — Binocular loupe 5x. f=70 mm. Drawings and calculations. 1914. In German. 1.50

1637-1647 PB L 73162 — Reflection on a prism roof edge. Notes and calculations. 1916. In German. 1.50

1648-1677 PB L 73162 — Seven-lens objective according to Kellner, f=14.7 mm. Drawings and calculations. 1905. In German. 3.00

1678-1700 PB L 73162 — Loupe according to Brücke, 3½x. Drawing and calculations. 1906. In German. 2.50

1701-1714 PB L 73162 — Loupe according to Brücke, 7x. Drawings and calculations. 1911. In German. 1.50

1715-1727 PB L 73162 — Aplanetic objective. Data and drawings. n.d. In German. 1.50

1728-1760 PB L 73162 — A very weak objective for a reading microscope. f=95.0 mm. Drawings and calculations. 1907. In German. 3.50

1761-1766 PB L 73162 — Achromatic loupe according to Brücke, 12x. Drawing and Calculations. 1906. In German. 1.50

1767-1775 PB L 73162 — Telescope objective f=150 mm. Calculations. 1905. In German. 1.50

1776-1781 PB L 73162 — Objective 5 according to Kellner - Beltzle f=8 mm. Drawings and data. 1905. In German. 1.50

1782-1805 PB L 73162 — Telescope. Calculations for a reversing system. 1905. In German. 2.50

1806-1810 PB L 73162 — Pancratic objective. Calculations. 1905. In German. 1.50

1811-1830 PB L 73162 — Objective 6p. f=3.82. Calculations. n.d. In German. 2.00

1831-1859 1871-1893 PB L 73162 — Fluorite objective 1/12a for cedar oil immersion. f=1.427 mm. Calculations. 1905 and 1913. In German. 5.50

1860-1870 PB L 73162 — Objective 4a. f=12.55 mm. A=0.29. Drawing and calculations. 1931. In German. 1.50

1894-1901 PB L 73162 — Objective 3. Calculations. 1914. In German. 1.50

1902-1908 PB L 73162 — Photographic ocular 4a. Drawing and calculations. 1908. In German. 1.50

1908-1937 PB L 73162 — Apochromat 1/12. f=1.83 mm. Drawing and calculations. 1905. In German. 3.00

1938-1940 PB L 73162 — Objective 3a. f=1.6235 mm. Drawing and calculations. n.d. In German. 1.50

1941-1966 PB L 73162 — Objective P 15. f=112.0 mm. Drawings and calculations. 1907. In German. 3.00

1967-2056 PB L 73162 — Objective 1, simple condenser. f=40.58 mm. Drawing and calculations. 1918. In German. 9.00

2057-2111 PB L 73162 — Periplanatic objectives 1/7 and 1/9. f=199.1 mm and f=150 mm. Drawings and calculations. 1902. In German. 5.50

2112-2117 PB L 73162 — Micrometric values of various objectives with Huygenian oculars. Tables. 1911. In German. 1.50

2118-2141 PB L 73162 — Enlargement tables for metallographic and other microscopes. 1915. In German. 2.50

2142-2157 PB L 73162 — Telescope objective f=180 mm. ocular f=18 mm. Drawings and calculations. 1911. In German. 2.00

2158-2190 PB L 73162 — Apochromat 2. f=3 mm A=1.42. Drawings and calculations. 1904. In German. 3.50

2191-2243 PB L 73162 — Apochromat 1/12. fluorite. f=1.90 mm. A=1.32. Drawings and calculations. 1900 and 1905. In German. 5.50

2244-2283 PB L 73162 — Goerz double anastigmat. f=210 mm and f=400 mm. Drawings and data. n.d. In German. 4.00

2284-2291 PB L 73162 — Leitz periplanatic objective f=200.0 mm. Calculations. n.d. In German. 1.50

2292-2298 PB L 73162 — Darkfield diaphragm for ultramicroscope. Calculations. 1904. In German. 1.50

2299-2301 PB L 73162 — Dark-field condenser for oil immersion. Drawing and calculations. n.d. In German. 1.50

2302-2308 PB L 73162 — Leitz monograph on darkfield illumination. n.d. In German. 1.50

2309-2325 PB L 73162 — Objective 1/12 with a fluorite lens. Drawing and calculations. 1913. In German. 2.00

2326-2330 PB L 73162 — Draft for an article on the theory of a microscope. n.d. In German. 1.50

2331-2348 PB L 73162 — Oculars for drawing apparatus. Drawings, tables and notes. 1912. In German. 2.00

PB L 73163. LEITZ, ERNST, G.M.B.H., WETZLAR, GERMANY. Articles, correspondence, drawings and calculations for optics and individual lenses, etc. (FIAT Microfilm Reel I 43, Frames 2349-3636) 1886-1930. 1288 f. Price: Microfilm-$6.00 - Enlargement print-$129.00.
This FIAT microfilm reel consists of 55 articles on optical topics and calculations and drawings for miscellaneous objectives, oculars, condensers and prisms as listed below. Individual items will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German when not otherwise specified.

Frames	Title	Price
2349-2375 PB L 73163	Leitz correspondence with German, French and British optical firms. 1900-1903. In German, French and English.	$ 3.00

2376-2389 PB L 73163 — Optical formulas. n. d. In German. 1.50

2390-2418 PB L 73163 — Ocular OO. Drawings and calculations. 1897. In German. 3.00

2419-2422 PB L 73163 — Projection objective f = 300 mm. Drawing and calculations. 1905. In German. 1.50

2423-2425 PB L 73163 — Monochromatic condenser for projection loup. Drawings and calculations. n. d. In German. 1.50

2426-2436 PB L 73163 — Glycerine condenser. Drawing and calculations. n. d. In German. 1.50

2437-2462 PB L 73163 — Projection objective f = 300 mm. Drawings and calculations. 1898. In German. 3.00

2463-2479 PB L 73163 — Objectivb 5a, f = 4.8 mm. A=0.51. Drawing and calculations. 1912. In German. 2.00

2480-2498 PB L 73163 — Correspondence and Leitz pamphlet on a "new photographic universal objective. Periplan." 1900. In German. 2.00

2499-2543 PB L 73163 — Periplanatic objective 2, f=24.0 mm. Calculations and drawing. 1917. In German. 4.50

2544-2554 PB L 73163 — Draft of an article on a Leitz micrometer. 1914. In German. 1.50

2555-2565 PB L 73163 — Draft of an article on a double microscope. 1914. In German. 1.50

2566-2631 PB L 73163 — Simple microscope and miscellaneous other brief calculations, also memoranda with formulas, etc. 1905. In German. 7.00

2632-2641 PB L 73163 — A weak objective with a large aperture, f=32.7 mm, A=0.18. Drawing and calculations. 1905. In German. 1.50

2642-2659 PB L 73163 — Cylindrical lens for the production of a very thin light beam. Calculations and drawings. 1905. In German. 2.00

2660-2668 PB L 73163 — Zeiss aplanatic condensers, 1:1,4. Drawings and data. 1911. In German. 1.50

2669-2694 PB L 73163 — Apochromat f=9.2 mm. Drawing and calculations. 1910. In German. 3.00

2695-2727 PB L 73163 — Comparator using micrometric ocular 10x and objectives 3 or 1. Data and an article by Dr. A. Zuttman on a new concrete comparator. 1930. In German. 3.50

2728-2783 PB L 73163 — Photographic triplet f=220.0 mm. Drawing and calculations. 1895. In German. 6.00

2784-2810 PB L 73163 — Objective W, f=3.0 mm. Drawing and calculations. 1912. In German. 3.00

2811-2832 PB L 73163 — Apochromat f=3 mm. from apochromat f=16 mm. Drawings and calculations. 1914. In German. 2.50

2833-2867 PB L 73163 — Stereoptical oculars by Kulpeper and Cuff. Calculations and drawings with data. n. d. In German. 3.50

2868-2887 PB L 73163 — Article accusing the editorial office of the Berlin "Zentral-Zeitung" of unfairness toward the Leitz firm. 1911. In German. 2.00

2888-2956 PB L 73163 — Objective 6, f=4 mm, A=0.65. Drawing and calculations. 1914. In German. 7.00

2957-2966 PB L 73163 — Objective 3, f=18 mm. Calculations. 1889. In German. 1.50

2967-2972 PB L 73163 — Objective 3g, f=12.75 mm. Calculations. n. d. In German. 1.50

2973-2981 PB L 73163 — Objective 3r, f=12.75 mm. Calculations. n. d. In German. 1.50

2982-2990 PB L 73163 — Optometor attached to a microscope. Drawings, tables and notes. 1898. In German. 1.50

2991-3039 PB L 73163 — Large illumination system for projection apparatus. Calculations, drawings, notes and data. 1898. In German. 5.00

3040-3052 PB L 73163 — Objective P 19, f=19.15 mm. Drawing and calculations. 1907. In German. 1.50

3053-3078 PB L 73163 — Objective for water immersion f=3 mm. Description, drawing and calculations. 1917. In German. 3.00

3079-3112 PB L 73163 — Apochromat f=2.0 mm. Drawing and calculations. 1920. In German. 2.50

3113-3115 PB L 73163 — Zeiss objective 1/12 for water immersion. Drawing and calculations. 1914. In German. 1.50

3116-3127 PB L 73163 — Cystoscope optics. Calculations and drawings. 1926. In German. 1.50

3128-3136 PB L 73163 — Lenses with great focal length. Drawings and calculations. n.d. In German. 1.50

3137-3147 PB L 73163 — Optics for a microspectroscope. Calculations and drawings. 1907. In German. 1.50

3148-3165 PB L 73163 — Microsummar objectives f=25.0 mm and f=35.0 mm. Calculations. n.d. In German. 2.00

3166-3175 PB L 73163 — Loupe for film examination, 5x. Drawing and calculations. 1930. In German. 1.50

3176-3177 PB L 73163 — Pocket microscope. Photograph, drawing and data. n. d. In German. 1.50

3178-3179 PB L 73163 — Loupe 2x, f=125 mm. Drawing and calculations. 1932. In German. 1.50

3180-3204 PB L 73163 — Aplanatic loupes according to Steinheil. 4x to 40x. Drawings and calculations. 1939. In German. 2.50

3205-3218 PB L 73163 — Stereoscope prisms. Drawings and calculations. 1928. In German. 1.50

3219-3228 PB L 73163 — Reprint of an article by Dr. C. von Tubeuf on a Leitz apparatus for drawing macroscopic objects published in the "Centrablatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten," Vol. V, 1899. In German. 1.50

3229-3234 PB L 73163 — Ocular for drawing apparatus. Drawings. n. d. In German. 1.50

3235-3284 PB L 73163 — Double anastigmat Periplan. Drawings, photograph, description and calculations, including a draft for patent application and respective correspondence. 1886. In German. 5.00

3285-3356 PB L 73163 — Periplanatic objective f=150 mm. Calculations and drawings. 1900. In German. 7.50

3357-3387 PB L 73163 — Photographic objective consisting of two members, f=216.3 mm. Drawing and calculations. 1896. In German. 2.50

3388-3441 PB L73163 — Photographic objective consisting of two members, f=222 mm. Drawing and calculations. 1895. In German. 5.50

3442-3473 PB L 73163 — Apochromat f=2 mm. Drawing and calculations. 1906. In German. 3.50

3474-3504 PB L 73163 — Letter transmitting microphotographs made with ultraviolet radiation and calculations for ultraviolet optics. 1906. In German. 3.50

3505-3523 PB L 73165 — Galilean telescope objective. Drawings and calculations. 1907. In German. 2.00

3524-3542 PB L 73165 — Aschoff's optical system, f=32.17 mm, A=0.16. Calculations and drawing. n. d. In German. 2.00

3543-3556 PB L 73165 — Collectors for illumination apparatus. Drawings and calculations. 1915. In German. 1.50

3557-3602 PB L 73165 — Article with drawings and calculations on a special arrangement of Huyghenian oculars. 1898. In German. 5.00

3603-3636 PB L 73165 — Objective 4, f=2 mm, A=0.30. Drawing and calculations. 1909. In German. 3.50

PB L 73159. LEITZ, ERNST, G.M.B.H., WETZLAR, GERMANY. Calculations and drawings for objectives and eyepieces. (FIAT Microfilm Reel I-39, Frames 7509-8451) 1889-1933. 943 F. Price: Microfilm-$6.00 - Enlargement print-$94.50. This FIAT microfilm reel consists of calculations and drawings for microscope objectives and other optical lenses as listed below. Individual items will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB and frame numbers when ordering individual items from this microfilm reel. In German.

Frames	Title	Price
7509-7529 PB L 73159	Objective 2, f=20.5 mm. Drawing and calculations. 1917. In German.	$2.50
7530-7611 PB L 73159	Compensation ocular 2, f=90.0 mm. Drawings and calculations. 1908. In German.	8.50
7612-7676 PB L 73159	Apochromat for oil immersion, f=3 mm. Calculations. 1927. In German.	5.50
7677-7690 PB L 73159	Objective for reading microscope, 3 x. Calculations. n.d. In German.	1.50
7691-7706 PB L 73159	Achromat 6 L, f=3.91 mm. Calculations and drawings. 1921. In German.	2.00
7707-7711 PB L 73159	Objective for workshop microscope, f=13 mm, A=0.20. Drawings and calculations. 1929. In German.	1.50
7712-7789 PB L 73159	Periplanatic ocular 10 X, f=26.0 mm. Drawing and calculations. 1914. In German.	8.00
7790-7829 PB L 73159	Objective for cinnamon oil immersion, f=1.75, A=1.40. Drawing and calculations. 1908. In German.	4.00
7830-7958 PB L 73159	Fluorite objective for naphthalene monobromide immersion, f=2.14, A=1.48. Drawing and calculations. 1933. In German.	13.00
7959-8035 PB L 73159	Sound film objective f=20 mm, A=0.45. Drawings and calculations. 1930. In German.	8.00
8036-8066 PB L 73159	Notes and calculations relating to various old lenses. 1889 - 1891. In German.	3.50
8067-8216 PB L 73159	First design of the naphthalene monobromide immersion system f=3.0 mm, A=0.87. Drawing and calculations. 1895. In German.	5.50
8217-8253 PB L 73159	Projection condenser f=77.0 mm, Drawings and calculations. 1933. In German.	4.00
8254-8327 PB L 73159	Huyghenian oculars 3x and 8x for micro-projection. Drawings and calculations. 1930. In German.	7.50
8328-8357 PB L 73159	Fluorite objective 6a, f=4.23 mm. Drawing and calculations. 1923. In German.	3.00
8358-8394 PB L 73159	Fluorite objective for oil immersion, 1/7a, f=3.45 mm A=0.95. Description, data, drawings and calculations. 1920. In German.	4.00
8395-8451 PB L 73159	Ultropak objective 22x, f=4 mm. Drawings and calculations. 1932. In German.	6.00

* PB L 81566. ROSE, C. R. and WHITE, D. R. German photosensitive products manufacture. (FIAT Final Rept 351, 354-360) Jul-Aug 1945. 200 p. Price: Mimeo-$5.00

This report is arranged into eight sections, each section being an individual report on manufacturers visited. Section I; Göbel A. G., Darmstadt manufacturer of equipment for the photo industry, e. g. single fly knives, multiple knives and guillotine knives (for film or paper). Section II; Schleussner Film Werke, Neu Eisenberg, manufacturer of photosensitive products. Section III; Otto Peruts, G.m.b.H., Munich, report on plant practices is given. Section IV; Degussa, Frankfurt am Main, manufacturer of photographic silver nitrate. Section V; covering four photographic gelatine plants. Section VI; Kalle & Company, Biebrich, manufacturer of photosensitive products. Section VII; AGFA plant at Wolfen, covering interviews with the technical personnel. Section VIII; AGFA paper plant at Leverkusen. The operating procedure and equipment are described. Formulae for the various emulsion coatings for paper are given in the Appendices, including those for the color print paper.

RUBBER AND RUBBER PRODUCTS

* PB L 80383. CORRELL, H. and KERN, W. The synthesis of acrylamides and the copolymerization of acrylamides and butadiene. (English translation). (FIAT Final Rept 978). Jun 1947. 14 p. Price: Mimeo-$0.50
These two papers on production of acrylamides, and an copolymerisation of butadienes with acrylamides, are translations of original reports, made in 1943, on work done in I. G. Farbenindustrie, Höechst.

* PB L 78997. MAJOR, COLEMAN J. Rubber vulcanization accelerators produced by I. G. Farbenindustrie, A.G., Höchst, Elberfeld, Leverkusen. (FIAT Final Rept 1018). Apr 1947. 91 p. Price: Mimeo-$2.50
Process details have been obtained for the manufacture of 22 rubber vulcanization accelerators. These are designated by the German trade name "Vulkacit" followed by appropriate designations specific to the individual compounds. The following accelerators have been covered in this report:

Vulkacit	AZ	Vulkacit	F	Vulkacit	576
"	BZ	"	FP	"	576 Extra
"	CA	"	H	"	774
"	CT	"	I	"	1000
"	CT-N	"	M		
"	D	"	P		
"	DM	"	P extra N		
"	DOTG	"	Thiuram		
		"	U		

Flow sheets appear in the text. Diagrams of apparatus are attached.

PB L 80757. OHLINGER. The development of the new styrene catalyst. (Translation of a German report.) (Reconstruction Finance Corp. Office of Rubber Reserve Tech Rept RM-302) Sep 1945. 13 p. Price: Mimeo-50¢
The advantages obtained with the new catalyst used in the manufacture of styrene may be summarized as follows: (1) the yield of 80% (with oxides of Merck) respectively, 70-75% (with oxides of Lu) has been raised to 88-90% over very long periods of operation, (2) the performance of the oven with a normal run has been raised from 100 to 115 moto, (3) the regeneration with steam is no longer necessary, (4) the so-called residue in crude styrene has been lowered to 1.5-2%, (5) the volume of waste gas has been reduced by one-half; therefore, less cracking in ethylene and methane with corresponding lower formation of benzene and toluene, (6) the reaction of water gas put down to a minimum furnishes only 43% of the formerly produced CO_2 whereby less ethylbenzene is burnt, (7) the oven furnishes, even with very long runs, yields in the neighborhood of 90% and in this manner save the difficult and time consuming changes of catalysts, which is of great significance at a time when there exists a shortage of mechanics, (8) the saving on raw materials, such as benzene and ethylene, amounts to about 11%. The perfected catalysts Lu 82 and Lu 1440 have been filed in a comprehensive patent application. A plant diagram is attached.

* PB L 81617. ROBINSON, R. S. and WEEKS, O. A. Polyurethanes and synthetic resins. Interrogation of Professor Otto Bayer, chief of the organic chemical research department of I. G., Leverkusen. (BIOS Final Rept 1498, Item 22; Interrogation Rept 543) Jul 1946. 14 p.
Price: Microfilm-$1.25 - Photostat-$2.00
The report is divided into two sections and covers briefly the following: Section I. Polyurethanes, (A) Isocyanates, desmodure, (B) Hydroxylic reactant. Those chiefly used were (1) butanediol, (2) desmophens, (3) other polyhydroxy compounds such as phenol-formaldehyde resins, polyvinyl alcohol, cellulose derivatives, partial esters of glycerol, and oil-modified alkyd resins. Properties and uses, and surface-coating. Section II. Other synthetic resins for surface coatings. (A) Alkyd resins - (1) polybasic acids, (2) polyhydric acids, and (3) fatty acids and oils. (B) Miscellaneous resins, and emulsifying agents. The appendix covers such points as scope of reaction, laboratory preparation, linear polymers, lacquers, laminating, adhesives, alkyd resins and expanded rubber.

PB L 80753. TECHNICAL INDUSTRIAL INTELLIGENCE COMMITTEE. Styrene production in Germany. (Rept RM-284). Aug 1945. 22 p. Price: Microfilm-$1.00 - Photostat-$2.00
This report summarizes the results obtained at the several German synthetic rubber plants based on field team reports so far available. It is felt that sufficiently adequate information is now at hand to give a fairly accurate picture of the process used in Germany during the past few years. In view of the fact that these processes are similar to some of those used in the United States and Canada the information should be of immediate interest to the styrene producers in this country. Tables appear in the report. Flow sheets are appended.

TEXTILES AND TEXTILE PRODUCTS

* PB L 81627. FAIRHURST, E. and others. The German rayon dyeing, printing and finishing industry. (BIOS Final Rept 1359, Item 22) Sep 1946. 169 p. Price: Microfilm-$5.00 - Photostat-$17.00
A combined textile mission (see BIOS Final Rept 574; PB 34729, v. 3, p. 57) visited Germany in February 1946 to carry out reconnaissance work with a view to finding out the condition of the German textile industry, materially and technically, and to indicate which concerns were worth further investigation. The report is divided into the following sections: (a) List of firms visited, (b) recommendations for further and more prolonged study of 6 of these firms, (c) a long summary (11 pages), (d) individual reports on firms visited, and (e) appendix of items evacuated.

PB L 19921. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Patent applications from the Photo and Artificial Silk Patent Division, Wolfen, 1942-1943. (FIAT Microfilm Reel Patents 145) Mar 1946. 988 f. Price: Microfilm-$6.00 - Enlargement print-$99.00
A number of items included in this film pertain to the manufacture and processing of textiles, artificial fibers, rayon, etc. Abstracts of the film and the individual papers may be found in the Section: "Patents: Chemicals and Allied Products" of this issue of the Bibliography.

* PB L 85608. PEAKE, J. G. Evaluation of synthetic detergents and lubricants in the German wool industry. (BIOS Final Rept 1507, Item 22) Nov 1946. 9 p.
Price: Microfilm-$1.00 - Photostat-$1.00
Six factories were visited in order to assess the efficiency of synthetic detergents and mineral oil lubricants used in the German wool industry. An individual report covering information obtained at each firm is given.

PB L 177-S-3. WAGNER. NH_3 recovery from the blue water of the rayon and cuprama plants in Dormagen. (Appendix A-5, Supplement to PB 177) Translation in English. (CIOS File XIX-5, Item 22, Supp.) May 1944. 10 p.
Price: Mimeo-50¢
This supplement describing NH_3 recovery is divided into four parts: (1) theoretical principles of the process, (2) description of the process and apparatus, (3) power balance for NH_3 recovery, and (4) costs. The abstract concerning the plants and products appears in vol. 1, p. 26, this Bibliography.

TRANSPORTATION EQUIPMENT

AERONAUTICS

Engines and Propellers

PB L 30894. GREEN, R. A. Laboratory test of seal flex tube fittings. (AAF Materiel Command Memo Rept EXP-M-51/AD 1058, Addendum 1) May 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 30895. GREEN, R. A. Test of Aero Coupling Corporation hose assemblies. (AAF Materiel Command Memo Rept EXP-M-51/AD 1056, Addendum 1) Jun 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 86013. LIST, H. General view of the reports prepared by the Institute for Internal Combustion Engines, Vilsbiburg. Dec 1945. 34 p. Price: Microfilm-$1.75 - Photostat-$4.00
This is a survey covering 42 reports on research work carried out during the last years of the war by the Institute for Internal Combustion Engines at Vilsbiburg, near Munich, Bavaria, Dresden and Graz, Germany. The work covers the gas exchange, mixture preparation and working processes in Diesel engines, and in four-and two-cycle engines. The working method developed by the Institute was, in the last years of the war, also applied to recoil jet and exhaust driven turbines.

PB L 85138. LIST, H. Supercharge by means of gas oscillations in the suction pipe, especial consideration being taken of the condition in radial engines. (Institute for Internal Combustion Engines Rept 40) Jan 1946. 24 p. Price: Mimeo-75¢
This is the 40th report on research carried out by the Institute for Internal Combustion Engines. This report deals with the inertia of the gas column in suction pipes of a four-cycle engine through which a supercharging effect can be obtained when the suction pipe is properly designed. Valve timing, length and cross-section of suction pipe, cylinder measurements and engine speed must all be related in a determined manner. The determination by means of calculation of these relations is shown by means of the method given in report 20, see PB 85134. The results of experiments are communicated by means of which the accuracy of the calculation is proved. Eleven diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

PB L 30866. O'NEIL, K. E. Failures of engine mount vibration absorber cushions, No. 19B341-5 - 0-47 series airplanes. (AAF Materiel Command Memo Rept U-EXP-M-51-5324) Dec 1941. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

PB L 85130. ULLMANN, K. and ZINNER, G. Investigations to increase the power output of aero-engines: Loss repartition and possibilities to increase the power output of the British aero-engine type Napier-Sabre. (Institute for Internal Combustion Engines Rept 3) Jan 1946. Price: Mimeo-$1.50
This is the third report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. The work in this report covers: Increase in performance of the aero-engine "Napier Sabre II A"; Comparison of the slide-valve with other gas exchange systems (valves, rotary valves); and conclusions. Twenty diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

PB L 85129. ULLMANN, K. and WENNER, H. Investigations to increase the power output of aero-engines: Loss repartition and possibilities to increase the power output of the American aero-engine type Packard-Merlin V 1650 at 32800 ft. flying height. (Institute for Internal Combustion Engines Rept 2) Dec 1945. 57 p. Price: Mimeo-$1.50
This is the second report on research work carried out by the Institute for Internal Combustion Engines, during the last years of the war. The work covered is: Efficiency and power output of the ideal engine; Consideration of the volumetric efficiency; Thermodynamic losses of the actual engine; Mechanical losses of the actual engine; Losses in flow of the actual engine; Supercharger loss; Ways to increase the power output of the "Packard-Merlin" at 32,800 ft. flying height. For a general survey of 42 research reports by this Institute see PB 85129. Twenty-eight diagrams are included.

PB L 86007. ULLMANN, K. and WENNER, H. Measures to increase the power and loss repartition of the type DB 603. (Institute for Internal Combustion Engines Rept 4) Feb 1946. 70 p. Price: Microfilm-$2.50 - Photostat-$7.00
This is the fourth report on research carried out by the Institute for Internal Combustion Engines. This report is concerned with the total losses, loss distribution and measures to increase the power output of the aero-engine type DB 603 at 32,800 feet flying height. It is shown how the altitude performance of the engine is ascertained by combination of experiments and calculations. Thirty-six diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

Rockets and Jet Propulsion

PB L 86008. HERSCHMANN, O. Thermodynamics and loss repartition of JP power plants and gas turbines. Part I. (Institute for Internal Combustion Engines Rept 38, 39) Jun 1946. 182 p. Price: Microfilm-$5.50 - Photostat-$19.00
This is Part I of the 38th and 39th report on research carried out by the Institute for Internal Combustion Engines, Vilsbiburg, Bavaria, during the last years of the war. This report 38/39 contains in three parts the essential results of the work done by the Institute on JP engines. Part I gives the thermodynamics of the working process as a foundation for the systematic development of the JP engine and the gas turbine. Twenty-six diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129. For part II of this report see PB 86009.

PB L 86009. LIST, H. and STIER, R. Thermodynamics and loss repartition of jet propulsion plants. Part II. The combustion chamber. (Institute for Internal Combustion Engines Rept 38, 39) May 1946. 93 p. Price: Mimeo-$2.25
This is Part II of the 38/39th report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report 38/39 contains in three parts the essential results of the work done by the Institute on J. P. engines. Part II deals with the foundations for design and testing of combustors. Special at-

tempts have been made to extend as far as possible the range of calculation for the different problems and thus to hedge in the extent of purely experimental developments. Nineteen sketches and sixteen diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129. For part I of this report see PB 85008.

PB L 85137. ULLMANN, K. and WEHNER, H. Investigations to determine the efficiency of exhaust recoil jets. (Institute for Internal Combustion Engines Rept 32) Mar 1946. 41 p. Price: Mimeo-$1.25
This is the 32d report on research carried out by the Institute for Internal Combustion Engines during the last years of the war. This report deals with method and results of the determination of the actual and theoretical thrust delivered by the utilisation of exhaust gas energy in exhaust recoil jets. Twenty-one diagrams are included. For a general survey of 42 research reports by this Institute see PB 85129.

MARINE TRANSPORTATION

PB L 85140. U. S. NAVAL TECHNICAL MISSION TO JAPAN. Characteristics of Japanese naval vessels. Article 12. Boilers and machinery. (Rept S-01-12). Apr 1946. 105 p. Price: Mimeo-$2.75
No new or positive information of the details of design or construction of boilers and machinery was developed by this investigation. The general status of Japanese boiler and machine design was on a rather low level. What was good appeared to have been copied from United States or British design. German design influence strangely seemed to be lacking. This report is based almost entirely on detailed studies of shop drawings and acceptance trial machinery data and inspections of equipment at Navy Yards and in ships. The Japanese Navy had standardized boiler design to a single shape and size. A very detailed description is given on this design including graphs, tables and drawings.

PB L 85141. U. S. NAVAL TECHNICAL MISSION TO JAPAN. Woods, textiles, rubber, and plastics used in Japanese naval vessels. (Rept S-95 (N)). Jan 1946. 11 p. Price: Mimeo-$0.50
Wood of many varieties was used extensively in Japanese naval vessels, and the workmanship in wood was very careful. Even on modern steel ships, wood was used for equipment such as furniture, shelving, and cabinets. Textile, rubber, and plastics in moderate amounts found essentially the same uses as in U. S. naval vessels. The various woods and textiles, rubber and plastics as used aboard Japanese ship and naval vessels are listed in this report.

MISCELLANEOUS

PB L 80821. BLACK, SIMON and others. The oxidation of acetate by yeast in the presence of fluoroacetate. n. d. 27 p. Price: Mimeo-$1.25
The time of addition of fluoroacetate to yeast with respect to acetate affected the initial rate of oxygen consumption. After an extended period the rates became constant and identical regardless of the relative order of addition. When fluoroacetate was added to yeast 25-30 minutes prior to acetate a significant oxygen uptake did not occur until an extended period had elapsed. Oxidation during this period was catalytically stimulated by ethanol, acetaldehyde, succinate, and succinic semialdehyde. Ethanol and succinate each potentiated the effect of the other. Acetate formed as an intermediate in ethanol oxidation was oxidized at a good rate in fluoroacetate poisoned yeast under conditions very unfavorable to the oxidation of added acetate. Some effects of varying pH values on the effectiveness of fluoroacetate as an inhibitor of acetate oxidation in yeast cells are described.

PB L 70256. I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN-GRIESHEIM, GERMANY. Reports and reprints on welding and production of hydrogen. (FIAT Microfilm Reel AA-40, Frames 1-996) 1910-1944. 1107 f. Price: Microfilm-$6.00 - Enlargement print-$111.00
This reel was prepared by FIAT investigators in Germany. 146 individual items are listed below and will be available as enlargement prints. Please include PB and frame numbers when ordering individual items. In German. (Two reports are in Russian.)

Frames	Title	Price
1-11 PB L 70258	Repairing of used anchor chains by means of deposition welding. Jan 28, 1943. In German.	$1.50
12-22 PB L 70258	Testing worn chain links of a 22 mm conveyor chain repaired by deposition welding. Jun 30, 1943. In German.	1.50
23-25 PB L 70258	Welding of anchor chains. Jun 25, 1943. In German.	1.50
26-46 PB L 70258	Fatigue tests with chain links. May 3, 1943. In German.	2.50
47-71 PB L 70258	Autogenous welding of chains. Sep 14, 1943. In German.	2.50
72-73 PB L 70258	Autogenous welding of chains. By Dr. Ing. W. Fuengel, Sep 9, 1942. In German.	1.50
74-103 PB L 70258	Repairing worn out conveyor chains by deposition welding. Sep 9, 1942. In German.	3.00
104-105 PB L 70258	Chain welding. By Dr. Duempelmann. Sep 3, 1942. In German.	1.50
106-116 PB L 70258	Chain manufactured by gas welding. By Dr. Fungel, Jun 5, 1942. In German.	1.50
117-128 PB L 70258	Repair of worn out conveyor chains by deposit welding. May 30, 1942. In German.	1.50
129-142 PB L 70258	Metallurgical processes during welding. By Dimpelmann. Nov 2, 1943. In German.	1.50
143-151 PB L 70258	New developments in welding. By Dr. Dimpelmann, Jan 6, 1942. In German.	1.50
152-177 PB L 70258	Present state of welding technique. By Dr. Dumpelmann, Apr 4, 1939. In German.	3.00
178-185 PB L 70258	Influence of the shape of welding seams on the alternating stress of weldings. By Werner and others, Mar 27, 1944. In German.	1.50
186 PB L 70258	The structure of welded joints. By Dr. Dumpelmann, Feb 23, 1944. In German.	1.50
187-189 PB L 70258	Welding tests of steel sheets of high strength. May 24, 1941. In German.	1.50
190-192 PB L 70258	Fillet welding of high strength steel plates. Apr 25, 1941. In German.	1.50
193-194 PB L 70258	Standards for boiler plates. Apr 1944. In German.	1.50

Miscellaneous (contd)

196-196 PB L 70258	Contribution to welding processes of St 52. Jul 1939. In German.	1.50
197-200 PB L 70258	Testing of a welded cylinder. Jan 18, 1940. In German.	1.50
201-244 PB L 70258	Testing of welded iron barrels. Apr-Sep 1939. In German.	4.50
245-248 PB L 70258	Welding of pipe lines according to Schwantke and Lindner. Mar 5, 1942. In German.	1.50
249 PB L 70258	Measures for saving high-speed steel. Jun 1944. In German.	2.00
250-272 PB L 70258	Welded milling cutters. May 31, 1943. In German.	1.50
273-279 PB L 70258	Tests for applying the welding technique on tools used for the construction of tanks. Aug 25, 1942. In German.	1.50
280-300 PB L 70258	Status of the drop-shape high-speed steel hard facing method. Oct 11, 1943. In German.	2.50
301-318 PB L 70258	Equipment and devices for Gridur welding plants. Oct 15, 1943. In German.	1.50
319-343 PB L 70258	Cold welding of alloyed and unalloyed cast iron of various quality. Feb 1, 1941. In German.	2.50
344-347 PB L 70258	Weldable malleable cast iron. n. d. In German.	1.50
348-360 PB L 70258	New "DS" electrode coating. n. d. In German. (Translation from Russian).	1.50
361-378 PB L 70258	Stabilization of the arc process and melting-off velocity of electrodes. By Rusanowitsch, Dec 27, 1938. In German. (Translation from Russian).	2.00
379-393 PB L 70258	Theoretical principles for the composition of coatings of electrodes for the welding of carbon steels. By A. A. Jerochin, Jun 27, 1938. In German. (Translation from Russian).	1.50
394-433 PB L 70258	Metallurgical processes in arc welding. 1937. In German. (Translation from Russian).	4.00
434-435 PB L 70258	Stabilization of the welding arc. By Buschtet and others. n. d. In Russian.	1.50
436-448 PB L 70258	Stability of the welding arc and the velocity of the melting of electrodes. By Russanjewitsch. In Russian.	1.50
449-452 PB L 70258	Madless acetylene plant at the Zeppelin Wasserstoff-und Sauerstoff-Werke, Berlin-Staaken. Apr 8, 1944. In German.	1.50
453-456 PB L 70258	Polymerization tests in an acetylene bell. Mar 27, 1944. In German.	1.50
457-461 PB L 70258	Investigations of the dry generator of the "Zewas, Staaken." Jan 26, 1944. In German.	1.50
462-463 PB L 70258	Madless acetylene generator. Jan 8, 1944. In German.	1.50
464 PB L 70258	Acetylene generator. Hydronalium welding. Apr 8, 1943. In German.	1.50
465-466 PB L 70258	Madless acetylene generator. Mar 5, 1943. In German.	1.50
467-471 PB L 70258	Madless acetylene generator of the ET 4 type. Feb 23, 1943. In German.	1.50
472-473 PB L 70258	Acetylene gas production. Jan 26, 1943. In German.	1.50
474-475 PB L 70258	Lime for building purposes. Oct 7, 1942. In German.	1.50
476-481 PB L 70258	Summary of welding and soldering processes. By Dr. Holler, Nov 25, 1941. In German.	1.50
482-484 PB L 70258	Reports on welding tests. By Dr. Holler, Jun 4, 1941. In German.	1.50
485-513 PB L 70258	Present state of welding technique. By Dr. Dümpelmann, Apr 5, 1939. In German.	3.00
514-522 PB L 70258	Precautionary measures for autogenous welding and cutting. n. d. In German.	1.50
523-537 PB L 70258	Welding instructions, training for welders, supervision of welding operations in plants. By Geiger, Apr 4, 1939. In German.	1.50
538-543 PB L 70258	Welding of plated sheets. n. d. In German.	1.50
544-546 PB L 70258	Delivery and testing directions for Izett. Oct 25, 1938. In German.	1.50
547-550 PB L 70258	Newer investigations of Igelit PCU. By Buchmann, Oct 25, 1938. In German.	1.50
551-576 PB L 70258	Present state of welding. By Dümpelmann, Oct 25, 1938. In German.	3.00
577-585 PB L 70258	Load conditions in the Jones test. By Dr. Werner, Oct 25, 1938. In German.	1.50
586-614 PB L 70258	Protection against corrosion. By Ing. Frank, Oct 25, 1938. In German.	3.00
615-623 PB L 70258	Welding of alloyed steels in the high pressure plant at Hoechst. By Wessing, Oct 25, 1938. In German.	1.50
624-631 PB L 70258	Summary of welding developments for 1941-1942. By Duempelmann, Sep 15, 1942. In German.	1.50
632-633 PB L 70258	Hard metal welding. Jul 17, 1942. In German.	1.50
634 PB L 70258	Testing schedule for Gridur SMV und Gridur SW. By Duempelmann, Jul 17, 1942. In German.	1.50
635-638 PB L 70258	Summary of laboratory research for the first half year of 1942. By Duempelmann, Jul 9, 1942. In German.	1.50
639-641 PB L 70258	Welding rod. By Duempelmann, Jul 2, 1942. In German.	1.50
642-645 PB L 70258	Welding electrodes and coatings for electrodes. By Duempelmann, Mar 23, 1942. In German.	1.50

646-647 PB L 70258 — Various welding electrodes. By Duempelmann, Mar 19, 1942. In German. 1.50

648-653 PB L 70258 — Tests with welding and soldering processes. By Dr. Holler, Nov 25, 1941. In German. 1.50

654-657 PB L 70258 — Development and production problems of various hard metal electrodes. Aug 13, 1941. In German. 1.50

658-664 PB L 70258 — Summary of the laboratory research work from Jan 1, to Jun 30, 1940. By Duempelmann, Aug 2, 1941. In German. 1.50

665-667 PB L 70258 — Development of welding electrodes. By Dr. Holler, Jun 4, 1941. In German. 1.50

668-671 PB L 70258 — "H" welding electrodes. May 23, 1941. In German. 1.50

672-678 PB L 70258 — Autogenous welding. By H. Schnedler, Sep 1942. In German. 1.50

679-683 PB L 70258 — The "Klin-Hafergut" welding process. By Otto Haberger, Sep 1942. In German. 1.50

684-688 PB L 70258 — Curves showing the capacity of acetylene flames and natural gas. May 4, 1944. In German. 1.50

689 PB L 70258 — Quantitative analysis of acetylene in liquid oxygen with Jlosvay's reagent. Feb 1, 1944. In German. 1.50

690 PB L 70258 — Dry gasification of carbide by means of the mudless generator. Jan 26, 1944. In German. 1.50

691 PB L 70258 — "Perchloron" tablets. Oxygen generation. Dec 15, 1942. In German. 1.50

692 PB L 70258 — "Perchloron" tablets. Oxygen generation. Aug 11, 1942. 1.50

693 PB L 70258 — Oxygen generation from "perchloron." Jul 20, 1942. In German. 1.50

694-697 PB L 70258 — Oxygen generation. Dec 29, 1941. In German. 1.50

698 PB L 70258 — "Perchloron tablets." Nov 21, 1941. In German. 1.50

699-701 PB L 70258 — Process for production of liquefied stable gases, especially of liquid acetylene, liquefying immediately from the solid state. Apr 22, 1939. In German. 1.50

702-707 PB L 70258 — Influence of hydrogen phosphide and hydrogen sulfide on the weldability of steels. By Dr. Maier, Oct 1940. In German. 1.50

708-710 PB L 70258 — Method and production of gases from solid and liquid substances. Mar 1, 1940. In German. 1.50

711-715 PB L 70258 — Spontaneous ignition of hydrogen. By M. Patry, Aug 19, 1938. In German. 1.50

716-724 PB L 70258 — Tarnishing oxidation of metals during annealing in hydrogen. Jul 15, 1940. In German. 1.50

725 PB L 70258 — Production of hydrogen from calcium hydride. Mar 20, 1940. In German. 1.50

726 PB L 70258 — Solubility in liquid paraffin. May 21, 1937. In German. 1.50

727 PB L 70258 — Storing of hydrogen. Feb 8, 1936. In German. 1.50

728 PB L 70258 — Production of hydrogen. Oct 16, 1934. In German. 1.50

729-731 PB L 70258 — The influence of contaminations in hydrogen with regard to autogenous cutting. Aug 29, 1934. In German. 1.50

732 PB L 70258 — Hydrogen. May 21, 1931. In German. 1.50

732 PB L 70258 — The calculation of the loss of toluene or benzene when emptying a 40 l bottle. May 21, 1931. In German. 1.50

733-743 PB L 70258 — Iron carbonylin hydrogen. May 19, 1931. In German. 1.50

744-746 PB L 70258 — The production of cheap hydrogen by dissociation of ammonia. Dec 1930. In German. 1.50

747-748 PB L 70258 — Iron carbonyl. In German. 1.50

749-752 PB L 70258 — Eliminating oxygen from electrolytic hydrogen. Jun 7, 1940. In German. 1.50

753 PB L 70258 — Iron carbonylin hydrogen. Jun 5, 1930. In German. 1.50

754-755 PB L 70258 — Increased output of electrical hydrogen-cooled machines. Sep 1, 1929. In German. 1.50

756-758 PB L 70258 — Water gas. May 15, 1928. In German. 1.50

759-761 PB L 70258 — Iron carbonylin hydrogen. May 2, 1928. In German. 1.50

762-766 PB L 70258 — Complaints concerning hydrogen. Jan 26, 1928. In German. 1.50

767-790 PB L 70258 — Report of the taking over inspection of the Marine Gas Werke in Ahlhorn i/O. By Scheme, Aug 17, 1917. In German. 2.50

791 PB L 70258 — Production of hydrogen by "Chemische Fabrik Griesheim-Elektron, Frankfurt/Main." Jun 1914. In German. 1.50

792-795 PB L 70258 — Gas piping. n. d. In German. 1.50

796 PB L 70258 — Production of hydrogen by "Carl Franckes Wasserstoffgas-Gesellschaft m.b.H, Bremen." By Carl Francke, 1915. In German. 1.50

797 PB L 70258 — Electrolyzer type N 20/40 of the Bamag system. In German. 1.50

798 PB L 70258 — Installation for the generation of hydrogen by means of the Pintsch method. Dec 1913. In German. 1.50

799 PB L 70258 — Application of water gas for the reduction of operational expenses, and improvement of manufacturing. 1914. In German. 3.50

800-803 PB L 70258 — The evaporation graphs of two generators. In German. 1.50

804-815 PB L 70258 — Report on desulfurizing tests. Jul 4, 1916. In German. 1.50

Miscellaneous (contd)

816-818 PB L 70258 — Red lead ore in combination with Stordoe-ore, for the generation of hydrogen. By Beck, Feb 10, 1917. In German. 1.50

819-823 PB L 70258 — Red lead. By Grossmann, Oct 27, 1916. In German. 1.50

824-846 PB L 70258 — The generation of hydrogen. 1921-1926. In German. 2.50

847-848 PB L 70258 — Operation regulations for the double tunnel water gas generator. n. d. In German. 2.00

849-851 PB L 70258 — Compounds for the generation of water gas. n. d. In German. 1.50

852-858 PB L 70258 — Test with the water gas generator. n. d. In German. 1.50

859-867 PB L 70258 — Hydrogen generation by means of pre-roasted pyrites mixed with pieces of fire clay. Aug 1, 1916. In German. 1.50

868-870 PB L 70258 — Analysis of fresh and used brown iron ore. By Nickel, Aug 9, 1918. In German. 1.50

871 PB L 70258 — Investigation of contaminated samples from separators. Dec 4, 1918. In German. 1.50

872-873 PB L 70258 — Hydrogen analysis. Apr 6, 1946. In German. 1.50

874-880 PB L 70258 — Gas analytical investigations in the hydrogen plant at Griesheim. By Maier, Mar 18, 1926. In German. 1.50

881-886 PB L 70258 — Gas-density meter. By Gmelin, Feb 20, 1920. In German. 1.50

887-895 PB L 70258 — Automatic analysis of hydrogen. By Gmelin, May 21, 1917. In German. 1.50

896 PB L 70258 — Gas interferometers. By Dr. Ottomar Wolff, 1917. In German. 1.50

897 PB L 70258 — Determination of the concentration of colloidal suspensions by means of a new fluid interferometer. By Dr. H. Marc, 1912. In German. 1.50

898 PB L 70258 — Gas analysis. Use of the interferometer. By Dr. Ing. R. von Klemperer, 1911. In German. 1.50

899 PB L 70258 — Portable interferometer for liquids and gases. By F. Loewe, 1910. In German. 1.50

900-900E PB L 70258 — Use of the Zeiss interferometer for the technical analysis of flue and stack gases. By O. Mohr, 1912. In German. 1.50

901 PB L 70258 — New interferometer for gases and liquids. By F. Loewe, 1910. In German. 1.50

902-904 PB L 70258 — Zeiss interferometer for gases. By E. Lucion, 1913. In German. 1.50

905 PB L 70258 — Refraction exponent of gas mixtures. By Valentiner and Zimmer, Nov. 1913. In German. 1.50

906 PB L 70258 — The portable interferometer for the determination of the methane content in air samples of mines. By Dr. Küppers, 1913. In German. 1.50

907-913 PB L 70258 — Gas analysis apparatus. 1919. In German. 1.50

914-922 PB L 70258 — Analytical apparatus for hydrogen W/L. By Dr. Loewenstein, 1919. In German. 1.50

923-926 PB L 70258 — Gas analysis. By Dr. Loewenstein, n. d. In German. 1.50

927 PB L 70258 — Ore stones for the hydrogen generator. By Maier, Oct 13, 1931. In German. 1.50

928 PB L 70258 — Analysis of a sample of brown iron ore. Oct 22, 1929. In German. 1.50

929 PB L 70258 — Ore sample from the "Magdalena" mine. Feb 9, 1929. In German. 1.50

930 PB L 70258 — Generation of hydrogen by means of red lead ore. Feb 13, 1926. In German. 1.50

931-945 PB L 70258 — Ore stones for the hydrogen generator. By Maier, May 20, 1927. In German. 1.50

946-951 PB L 70258 — A new fluxing agent. Mar 1, 1941. In German. 1.50

952-978 PB L 70258 — Welding powder for zinc alloys. Feb 3, 1941. In German. 3.00

979-981 PB L 70258 — Stage of autogenous welding of zinc and zinc alloys. Oct 20, 1939. In German. 1.50

982 PB L 70258 — "Alubronze 5" for electrodes. Jun 28, 1943. In German. 1.50

983-985 PB L 70258 — Deposit welding with hard copper. Jun 24, 1943. In German. 1.50

986-987 PB L 70258 — Copper electrodes. May 10, 1943. In German. 1.50

988-992 PB L 70258 — Brass welding wires, type "Bronzyt" and copper welding wires type "Erkade," of the Kabel und Drahtfabrik im Bendsin." Nov 29, 1941. In German. 1.50

993-996 PB L 70258 — "Griesheim 16" nickel electrodes. Aug 7, 1940. In German. 1.50

PB L 73530. KAHLSRUHE, GERMANY. TECHNISCHE HOCHSCHULE. Dissertations in natural science. (FIAT Microfilm Reel M-85, Frames 4401-5126) 1938-1945. 725 f. Price: Microfilm-$6.00 - Enlargement print-$72.50.
This reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
4401-4469 PB L 73530	Abstracted with reel M 84, PB 74699 frames 4352-4400.	$7.00
4470-4535 PB L 73530	Change of shape in beams in the elastic-plastic state of the material. By Woldemar Swida. 1944. In German.	7.00
4536-4576 PB L 73530	Experiment for the direct oxidative cleavage of the double bond. By Kurt Zopf. 1944. In German.	4.00

Miscellaneous (contd)

4577-4617 PB L 73530 — Determination of the relationship of crystalline and amorphous substances in rayon fibers by means of x-rays. By Ludwig Flaschner. Aug 22, 1945. In German. 4.50

4618-4670 PB L 73530 — Oxidation of ethylene into ethylene oxide. By Maria Th. Meter. 1945. In German. 5.50

4671-4752 PB L 73530 — The autoxidation of saturated hydrocarbons and cyclic ethers and the qualities of the hydrogen peroxides developed therewith. By Rudolf Tannenberger. 1945. In German. 8.50

4753-4904 PB L 73530 — The buckling of arched girders with unsymmetrical load. By Ernst Dantsch. Jul 1938. In German. 8.50

4905-5042 PB L 73530 — "Ground sills" in navigable waters. By Baurat G. Schneider. n.d. In German. 14.00

5043-5075 PB L 73530 — Determination of the pressure in "Ueberfallhauben" (weir hoods) of different width for the Czchow weir installation. Oct 3, 1941. In German. 1.50

5076-5090 PB L 73530 — Tests on models for the construction of a flooding valve with dissipation of energy on dock gates. Feb 21, 1941. In German. 1.50

5091-5122 PB L 73530 — Flow pebble motion and hydraulic calculation in weirs and sluice ways of water-power-stations. By P. Boss. Dec 19, 1944. In German. 3.50

5123-5126 PB L 73530 — The electromotive force induced into a rotor coil on polyphase motors having commutators. By e.h.R. Richter. n.d. In German. 1.50

PB L 73530-S. KARLSRUHE, GERMANY. TECHNISCHE HOCHSCHULE. Dissertations in natural science. (FIAT Microfilm Reel M-85, Frames 4401-5126, abstract cards) 1938-1945. 15 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Brief abstracts are given in English of the reports in FIAT reel M-85.

PB L 82074. KAISER WILHELM INSTITUT FÜR EISENFORSCHUNG, DÜSSELDORF, GERMANY. Publications in chemistry and metallurgy. (FIAT Microfilm Reel K 82, Frames 2171-3076) 1939-1944. 905 f. Price: Microfilm-$7.00 - Enlargement print-$92.00
This reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $7.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price

This reel contains a reproduction of several books and printed lectures. These are:

2171-2353 PB L 82074 — "Thermo-chemistry of alloys", by Weibke and Kubaschewski. In German. $20.00
The experimental and theoretical foundations of the thermo-chemical methods. Heat of formation, mixing and fusion of alloys. 356 pages. 1943. Publisher: Springer, Berlin.

2354-2499 PB L 82074 — "Steel wire, its production and properties", by Anton Pomp. In German. 16.00
Volume 1 of the Stahleisen books. 275 pages. 1941. Publisher: Stahleisen, Düsseldorf.

2500-2597 PB L 82074 — "Friction and wear." In German. 11.00
Lectures of the VDI-wear meeting in Stuttgart, October 28 and 29, 1938. 190 pages. 1939. Publisher: VDI-publishing house, Berlin.

2598-2731 PB L 82074 — "Corrosion tables of metallic materials (according to attacking substances). Revised in 1944; original in 1937. By Franz Ritter. In German. 15.00
262 pages. 1944. Publisher: Springer, Vienna.

2732-2790 PB L 82074 — "Precision determination of lattice constants according to the asymmetrical method", by Straumanis and Levins. In German. 7.00
106 pages. 1940. Publisher: Springer, Berlin.

2791-2832 PB L 82074 — "Surface and endurance strength", by Heinrich Wiegand. In German. 6.00
83 pages. 1940.

2833-2933 PB L 82074 — "Gmelins Handbook of inorganic chemistry" (Masurium, system number 69 and rhenium, system number 70). In German. 12.00
184 pages. 1941. Publisher: Chemitz, Berlin.

2934-3076 PB L 82074 — "Fire galvanizing" by Heins Bablik. In German. 16.00
271 pages. 1941. Publisher: Springer, Berlin.

PB L 80600. LEAVER, F. W. and others. Nutritional studies on Piricularia oryzae. n. d. 16 p. Price: Microfilm-$1.00 - Photostat-$2.00
On the basis of these studies, the nutritional requirements of P. oryzae appears to be relatively non-specific except with regard to the vitamins, thiamine and biotin being the only ones required. This fungus requires organically combined nitrogen (preferably α-amino acids) but a large number in which the nitrogen exists in amino, cyclic, imino or quaternary combination will support growth and conidia formation. No complete investigation was made of the essentiality of some of the other components of the medium, especially the inorganic ions. Although the fungus grew more uniformly on the chemically defined media than on natural media, such as rice polish agar, the degree of variation was considerable with all media. Perhaps greater uniformity would be gained through submerged dispersed growth in liquid media in place of surface growth. Although the production of conidia was less variable on an adequate chemically defined medium than on a natural medium (table 3), when certain of the pure nutrient compounds were omitted from chemically defined media to determine their essentiality (tables 4 and 6), the resulting cultures were sometimes as variable as those on rice polish agar.

PB L 82185. MINISTERIAL DOCUMENTS BRANCH, BERLIN. Railroad engineering and concrete construction. (FIAT Microfilm Reel B 248, Frames 9951-9999 and 1-813) 1938-1944. 862 f. Price: Microfilm-$7.00 - Enlargement print-$88.00.
This reel prepared by FIAT investigators in Germany consists mainly of correspondence and conference minutes. 26 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $7.00. Please include PB and frame numbers when ordering individual items. In German.

Miscellaneous (contd)

Frames	Title	Price
9951-9999 1-7 PB L 82185	Significance of the capacity of incoming and outgoing trains to the smooth operation of a shunting station and a railroad system. Submitted in the prize-competition of 1940 by the "Wissenschaftliche Vereinigung für Verkehrswesen E.V." In German.	$ 7.00
8-104 PB L 82185	Forces between railroad cars determined by means of drawings. n.d. In German.	11.00
105-192 PB L 82185	Contribution to research on the lubrication processes in the drive rod bearing of the locomotive. Submitted in the prize-competition of 1940 of the "Wissenschaftliche Vereinigung für Verkehrswesen e.V." In German.	10.00
193-212 PB L 82185	A new controller and brake circuit for DC operated vehicles. n. d. In German.	3.00
213-224 PB L 82185	Controller and brake circuit with constant current for DC operated vehicles. n. d. In German.	3.00
225-245 PB L 82185	Meeting concerned with the construction of chimneys based on DIN standards. 1941. In German.	4.00
246-266 PB L 82185	DIN conference on the construction of concrete rings for wells. 1941-1942. In German.	4.00
267-272 PB L 82185	The "Kriegel" concrete building stone for the construction of concrete walls without wooden forms. 1940. In German.	2.00
273-288 PB L 82185	DIN standards for Portland cement, iron Portland cement, and blast furnace cement. By the "Deutsche Normenausschuss", published by "Zement Verlag, Berlin." 1942. In German.	3.00
289-320 PB L 82185	Correspondence relating to tamping of concrete by vibration. 1942-1944. In German.	5.00
321-336 PB L 82185	Directions for the use of an internal vibration machine for tamping of concrete. 1943-1944. In German.	3.00
337-346 PB L 82185	Tests with internal vibration machines. By Ferdinand Kaufmann. n. d. In German.	2.00
347-353 PB L 82185	Reports on the present state of trough and table shakers for the manufacture of concrete work pieces. By Kurt Walz. n. d. In German.	2.00
354-363 PB L 82185	Table type shaker machine. By Ferdinand Kaufmann. n. d. In German.	2.00
364-376 PB L 82185	Trough shaker apparatus for tamping of concrete. By Kurt Walz. n.d. In German.	3.00
377-401 PB L 82185	Electrotechnical safety measures for the operation of high frequency internal shakers. By Bruno Widmann and Ferdinand Kaufmann. n. d. In German.	4.00
402-413 PB L 82185	Experiences with internal and external shaking machines at construction sites of the "Siemens-Bauunion G.m.b.H." By A. Spilker and B. Widmann. n.d. In German.	3.00
414-420 PB L 82185	Experiences with internal and table type shakers in concrete workshops. By O. Bohusszewitz, Wacker, and B. Widmann. n. d. In German.	2.00
421-424 PB L 82185	Inspection of concrete work shops. By Ferdinand Kaufmann. n. d. In German.	2.00
425-431 PB L 82185	Effects of vibration on setting concrete. By Kurt Walz. n. d. In German.	2.00
432-433 PB L 82185	Smoothening of concrete bodies. By Ferdinand Kaufmann. n. d. In German.	2.00
434-436 PB L 82185	Correspondence concerned with shaking concrete. 1944. In German.	2.00
437-501 PB L 82185	Tilting tests with "Peiner" steel beams. (Correspondence). 1941-1943. In German.	8.00
502-576 PB L 82185	"Torstahl", a special concrete steel. (Correspondence) 1938-1943. In German.	9.00
577-784 PB L 82185	Testing of steels used for welded construction. (Correspondence) 1941-1944. In German.	2.00
785-813 PB L 82185	Unalloyed material. (Correspondence) 1944. In German.	5.00

PB L 74048. MINISTERIAL DOCUMENTS BRANCH, BERLIN. Technological reports in various fields. (FIAT Microfilm Reel B-251, Frames 2282-2712) 1933-1944. 431 f. Price: Microfilm-$5.25- Enlargement print-$43.50
This reel was prepared by FIAT investigators in Germany. 27 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $6.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
2282-2345 PB L 74048	Activity report for 1939/40. By Heinrich Fass of the Institut für Schwingungsforschung der Technischen Hochschule, Berlin. In German.	$6.50
2346-2401 PB L 74048	The standard massive barracks and center aisle standard massive barracks. 1944. In German. This is vol. 15 of the periodical "Zu-gleich," published by "Otto Elsner, Berlin-Wien-Leipzig."	6.00
2402-2403 PB L 74048	Tank stations for trucks. By "Gasmotor Bielefeld Ing. S. Benda." 1933. In German.	1.50
2404-2406 PB L 74048	Blue light for air raid protection. By "Reichsminister der Luftfahrt," 1940. In German.	1.50
2407-2423 PB L 74048	Directions for the manufacture and use of blue paint for incandescent lamps. By "Reichsminister der Luftfahrt." 1940. In German.	2.00
2424-2466 PB L 74048	Electromagnetic testing device for ferromagnetic work pieces. 1939-1944. In German.	2.50
2467-2476 PB L 74048	Measuring methods for lathes. 1935. In German.	1.50
2477-2533 PB L 74048	Oxygen installations in repair shops of the "Reichsbahn." 1940. In German.	6.00
2534-2538 PB L 74048	Application for the release of lithium for anodic casting. 1944. In German.	1.50

Miscellaneous (contd)

2539-2543 PB L 74048 — Radio active light substance. U and U compounds. 1944. In German. 1.50

2544 PB L 74048 — The use of N compounds in the glass industry. 1944. In German. 1.50

2545-2548 PB L 74048 — Storage of sulfuric acid. 1944. In German. 1.50

2549-2550 PB L 74048 — Methods in the field of fungus fermentation. 1941. In German. 1.50

2551-2552 PB L 74048 — Directives for the preservation of glands. 1942. In German. 1.50

2553-2554 PB L 74048 — The use of bile for cleaning agents. 1942. In German. 1.50

2555-2557 PB L 74048 — Physiology of "Haribo Ambrosetten" (sedative for nerves). 1943. In German. 1.50

2558-2560 PB L 74048 — Allocation of beef marrow for pharmaceutical preparations. 1943. In German. 1.50

2561 PB L 74048 — Listing of endocrine glands. 1944. In German. 1.50

2562-2563 PB L 74048 — Investigation of products used for the care of teeth. 1944. In German. 1.50

2564-2565 PB L 74048 — Wetting agents and paradental damages. 1944. In German. 1.50

2566-2621 PB L 74048 — Electric measurements of the moisture content of rayon staple and other textile fibers. Dissertation by Heinz Mahlo. 1940. In German. 6.00

2622-2630 PB L 74048 — Conditioning of rayon staple discussed at the session of the "Textil-Technische Kommission" from the "Fachgruppe Chemische Herstellung von Fasern der Wirtschaftsgruppe Chemische Industrie." 1941. In German. 1.50

2631-2637 PB L 74048 — Hygroscopic measurements of rayon staple by means of the "Lippke" moisture control installation. 1940. In German. 1.50

2638-2639 PB L 74048 — Letter to members of the "Textil-Technische Kommission," concerned with conditioning of rayon staple. 1940. In German. 1.50

2640-2648 PB L 74048 — Electrical measurements of the moisture content of rayon staple bales. 1940. In German. 1.50

2649-2700 PB L 74048 — Reports and articles on the "Leppke" water content control system. 1940. In German. 5.50

2701-2712 PB L 74048 — Sulfur and ammonia from coke-oven-gas. 1943. In German. 1.50

*PB L 86033. OKNAM, J. S. Gelatine and glue industry with subsidiaries, animal fats and residue fertilisers in western Germany. (BIOS Final Rept 1431, Item 22) Dec 1946. 129 p. Price: Microfilm-$4.00 - Photostat-$13.00

A total of 21 targets was visited, and these were divided into three main groups: Group A - 5 firms primarily manufacturing gelatine; Group B - 9 firms primarily manufacturing glue; and 7 firms manufacturing animal fats. This survey is a separate report for each target visited. Generally the type of information sought was: products manufactured; raw material used; method of process; type of plant; method of raw material handling and material in process handling; process control; finished product analysis and control testing; and form of finished product. In every case the investigations were made with the object of ascertaining pre-war operating conditions.

PB L 80822. RICHARDS, A. GLENN and KOEDA, FRANCES H. Electron micrographs of centipede setae and microtrichia. 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

The report mentions work on serial sections of microtrichia of the common house centipede, Scutigera forceps by electron microscope and with a light microscope.

* PB L 81084. STRENT, W. O. and ROEBUCK, D. H. Manufacture of compressed woollen felt and hair felt in Germany. (BIOS Final Rept 1450, Item 22) Jul 1947. 15 p.

Price: Microfilm-$1.00 - Photostat-$1.00

Twelve firms were investigated and details are given on individual plants inspected. Subjects covered are: pre-war and post-war organization and capacity; description of plant and machinery installed; type and cost of raw materials; manufacturing cost; research; labor; and export. Estimated productive capacity of the individual firms, and approximate wartime composition of felt products are given in tabulated form.

PB L 82123. U. S. OCCUPATION FORCES IN GERMANY. WEATHER SERVICE, BAD KISSINGEN, GERMANY. Aeronautical and meteorological research. (FIAT Microfilm Reel Y 52, Frames 993-1732) 1938-1942. 740 f. Price: Microfilm-$7.00 - Enlargement print-$75.00

This reel was prepared by FIAT investigators in Germany and consists of two parts. Both sections are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $7.00. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
993-1316 PB L 82123	1942/1943 yearbook of the "Deutschen Akademie der Luftfahrtforschung." In German. This volume has already been made available as PB 25249, vol. 3, page 58, this Bibliography.	$34.00

Manuel of meteorology by Hann-Süring, consisting of seven parts and eight issues, 1938/42. Published by Willibald Keller, Leipzig.

1317-1334 PB L 82123	Composition, stratification and extension of the atmosphere. First part. In German.	3.00
1335-1355 PB L 82123	Radiation. Second part. In German.	4.00
1356-1432 PB L 82123	Temperature. Third part. In German.	9.00
1433-1476 PB L 82123	Air pressure. Fourth part. In German.	6.00
1477-1578 PB L 82123	Humidity of the air, condensation, clouds, rain, snow, etc. Fifth part. In German.	12.00
1579-1676 PB L 82123	Motion of the air. Sixth part. In German.	11.00
1677-1732 PB L 82123	Weather. Seventh part. In German.	7.00

PB L 82090. U.S. OCCUPATION FORCES IN GERMANY. WEATHER SERVICE, BAD KISSINGEN, GERMANY. Decimal classification

Miscellaneous (contd)

systems in military chemistry and meteorological publications. (FIAT Microfilm Reel Y 25, Frames 3212-3882) 1917-1942. 671 f. Price: Microfilm-$7.00 - Enlargement Print-$69.00
This reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $7.00. Please include PB and frame numbers when ordering individual items. In German and Dutch.

Frames	Title	Price
3212-3450 PB L 82090	Military chemistry with a decimal classification of the factors of fire, explosion, smoke screens, smokes and poisons. By Langhans. 1937. In German. Published by "Offene Worte," Berlin.	$25.00
3451-3647 PB L 82090	Maritime meteorology and oceanography. By P. Bossen. 1940. In Dutch. Published by "Kweekschool voor de Zeevaart," Amsterdam.	21.00
3648-3728 PB L 82090	Wind power in theory and practice. By K. Bilau. 1927. In German. Published by "Verlagsbuchhandlung Paul Parey," Berlin.	10.00
3729-3759 PB L 82090	Measurements of the exposure of buildings to the light of the sun. By Walter Neuzil. 1942. In German. Published by "Bauwelt Verlag," Berlin.	5.00
3760-3848 PB L 82090	Evaluation of the observations obtained from ascending radiosondes by means of "Hollerith" punch card machines. By H. Rauschelbach, "Marine observatorium." In German.	10.00
3849-3875 PB L 82090	Introduction to the meteorological research of large areas. By Franz Baur. 1937. In German. Published by "B. Teubner," Leipzig and Berlin.	4.00
3876-3882 PB L 82090	Problem of calms in air layers. By E. Palmen. 1941. In German. Published by "Akademische Buchhandlung, Helsingfors and "Otto Harrassowitz," Leipzig.	2.00

PB L 82118. U. S. OCCUPATION FORCES IN GERMANY, WEATHER SERVICE, BAD KISSINGEN, GERMANY. Publications in meteorology and aeronautics. (FIAT Microfilm Reel Y 55, Frames 3177-3643) 1940-1943. 467 f. Price: Microfilm-$7.00 - Enlargement print-$48.00.
This reel was prepared by FIAT investigators in Germany. 31 individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $7.00. Please include PB and frame numbers when ordering individual items. In French and in German.

Frames	Title	Price
	Publications of the "Institut royal meteorologique de Belgique". Editor "Etablissement d'Imprimerie l'Avenir, Bruxelles."	
3177-3195 PB L 82118	Fronts and cyclones over the Northern Atlantic, Western and Central Europe. By Jacques Jean Mieghem. 1942. In French.	$ 3.00
3196-3200 PB L 82118	The spectrum of the stars. By Marcel Nicolet. 1942. In French.	2.00
3200-3204 PB L 82118	The atmospheric temperature of the earth up to 100 Km. By Marcel Nicolet. 1942. In French.	2.00
3205-3293 PB L 82118	Introduction to the study of the relationship between the phenomena of the sun and the earth: The Sun by Marcel Nicolet. 1943. In French.	10.00
3294-3328 PB L 82118	Atmospheric thermodynamics. Part 1- Theory. By Jacques van Mieghem. 1943. In French.	5.00
	Various articles from periodicals. In French.	
3329-3341 PB L 82118	Cosmic radiation. By Alphonse M. Descamps. 1943. In French.	3.00
3342-3350 PB L 82118	Variations of pressure, temperature, and vertical thermal gradient in the atmosphere. By L. Dufour. 1943. In French.	2.00
3351-3359 PB L 82118	The general magnetic field of the sun and the observation of cosmic rays. By Alphonse M. Descamps. 1943. In French.	2.00
	Publications of the "Office National Meteorologique". In French.	
3360-3369 PB L 82118	Chemical relationships in meteorology. By Borrel. 1940. In French.	2.00
3370-3384 PB L 82118	The composition of the atmosphere. By Auberger. 1941. In French.	3.00
3385-3399 PB L 82118	Water vapor in the atmosphere. By M. Girand. 1941. In French.	3.00
3400-3412 PB L 82118	The historical development of the synoptic method. By Mironoviteh. 1941. In French.	3.00
3413-3444 PB L 82118	Still and motion picture photography in meteorology. By Mezin. 1941. In French.	5.00
3445-3460 PB L 82118	The Sun. By Nion. 1941. In French.	3.00
3461-3482 PB L 82118	Atmospheric turbulence. By Faillettaz. 1941. In French.	4.00
3483-3505 PB L 82118	The zones of great activity in the atmosphere. By Mironovitch. 1941. In French.	4.00
3506-3536 PB L 82118	Hoar frost. By Gilbert. 1941. In French.	5.00
3537-3554 PB L 82118	Calculatory elements of probability. By Bernadet. 1941. In French.	3.00
3555-3566 PB L 82118	Condensation clouds in the atmosphere. By Delatour. 1941. In French.	3.00
3567-3593 PB L 82118	Meteorology in ancient times. By Jeunet. 1941. In French.	4.00
3594-3614 PB L 82118	Hail. By Gassies. 1941. In French.	4.00
3615-3621 PB L 82118	Study of the positions of the tails of weathervanes. (No author) 1942. In French.	2.00
	"Technische Berichte" No 4, 1940. Edited by the "Zentrale fuer Wissenschaftliches Berichtswesen ueber Luftfahrtforschung des Generalluftzeugmeisters (ZWB)". In German.	
3622-3628 PB L 82118	The control forces at some stationary flight conditions and their influence on the design of aircraft. By G. Bock. In German.	2.00
3628-3629 PB L 82118	Possibilities of shortening the construction time of axial aircraft engine super chargers. By B. Eckert. In German.	2.00
3629-3632 PB L 82118	Gliding in the Alps. By E. Klöckner. In German.	2.00
3632-3633 PB L 82118	The fast FKFS method for determining the lead content in aircraft fuels. By O. Widmaier. In German.	2.00
3633-3636 PB L 82118	Testing of pressed resin bearings in the Jumo 205 engine. By E. Gilbert. In German.	2.00

Miscellaneous (contd)

3636 PB L 82118	Extreme brush wear of electrical machinery during high-altitude flying and its elimination. By H. Viehmann. In German.	2.00
3637-3638 PB L 82118	Observations at yawing. By W. Stender. In German.	2.00
3639-3642 PB L 82118	Short articles. In German.	2.00
3642-3643 PB L 82118	Reports from German research institutions. In German.	2.00

PB L 74925. GERMANY. VIEWEG, FRIEDRICH, & SOHN, BRAUNSCHWEIG, Publications in various fields. (FIAT Microfilm Reel # 34, Frames 1-499) 1940-1942. 499 f. Price: Microfilm-$5.75 - Enlargement Print-$50.00
This reel was prepared by FIAT investigators in Germany. Individual items are listed below and will be available as enlargement prints. The entire reel may be purchased as a microfilm for $5.75. Please include PB and frame numbers when ordering individual items. In German.

Frames	Title	Price
1-22 PB L 74925	Light steel used for the construction of machinery and tools. By Heinrich Heitzer and Friedrich Wilhelm Griese. 1941. In German. No. 8 of the publication "aus Theorie und Praxis der Elektroschweissung."	$2.50
23-86 PB L 74925	Precision measurements of capacitances, dielectric losses, and dielectric constants. By Erich Blech Schmidt. 1940. In German. No. 2 of the publication "Verfahrens- und Messkunde der Naturwissenschaften."	6.50
87-161 PB L 74925	Introduction to internal ballistics. By E. Bollé. 1941. In German.	7.50
162-198 PB L 74925	Thermal expansion of solid and liquid substances. By Hermann Ebert. 1940. In German. No. 1 of the publication "Verfahrens- und Messkunde der Naturwissenschaften."	4.00
199-272 PB L 74925	Sauerkraut and similar fermentation products. By Fritz Michholz. 1941. In German. Vol. 96 of "Die Wissenschaft." By Wilhelm Westphal.	7.50
273-499 PB L 74925	The climate of the air layer close to the earth. By Rudolf Geiger. 1942. In German. Vol. 78 of "Die Wissenschaft." By Wilhelm Westphal.	23.00

PATENTS

CHEMICALS AND ALLIED PRODUCTS

PB L 20546. GERMANY. I. G. FARBENINDUSTRIE A. G., LEVERKUSEN, Patent applications of the Leverkusen office, 1939-1941. (FIAT Microfilm Reel Patents 156; Frames 1126-2206, 16 mm microfilm) Mar 1946. 1115 f. Price: Microfilm-$6.00 - Enlargement print-$111.50.

This reel is a continuation of the listing of patents on reel Patents 155, PB 20547. The complete index of Hoechst patent office can be found on reel Patents 155, PB 20547. The individual items on this reel, Patents 156, are listed below. Individual items will be available as enlargement prints only; the entire reel may be purchased as a microfilm for $6.00. Please include the applicable PB number of each individual item ordered. In German.

PB Numbers Frames	Title	Price
L 66251 Frames 1125-1127	Process for obtaining pure amide-like compounds. Ger. patent application I.67475 IVd/12o, dated Jul 18, 1940. In German.	$ 1.50
L 66252 Frames 1128-1133	Process for mfg. condensation products. Ger. patent application I.67491 IVe/39e, dated Jul 20, 1940. In German.	1.50
L 66253 Frames 1134-1138	Process for producing sulfonamide compounds. Ger. patent application I.67492 IVe/12q, dated Jul 20, 1940. In German.	1.50
L 66254 Frames 1139-1141	Process for preparing pantothenic acid. Ger. patent application I.67493 IVd/12o, dated Jul 20, 1940. In German.	1.50
L 66255 Frames 1142-1144	Cleansing agent. Ger. patent application I.67500 IVd/81, dated Jul 20, 1940. In German.	1.50
L 66256 Frames 1145-1150	Production of moulded masses. Ger. patent application I.67512 IVe/39b, dated Jul 27, 1940. In German.	1.50
L 66257 Frames 1151-1155	Process for fast colors. Ger. patent application I.67513 IVd/8m, dated Jul 27, 1940. In German.	1.50
L 66258 Frames 1156-1162	Process for production of tanning agents. Ger. patent application I.67520 IVe/12q, dated Jul 29, 1940. In German.	1.50
L 66259 Frames 1163-1174	Process for producing aromatic ketones. Ger. patent application I.67559 IVe/12o, dated Jul 31, 1940. In German.	1.50
L 66260 Frames 1175-1179	Process for obtaining suitable substances to combat virus diseases of plants. Ger. patent application I.67570 IVe/22g, dated Jul 24, 1940. In German.	1.50
L 66261 Frames 1180-1189	Process for producing ethers and thioethers. Ger. patent application I.65933 IVd/12o, dated Nov 9, 1939. In German.	1.50

L 66262 Frames 1190-1192 — Process for preparing cyanoethers. Ger. patent application I.66624 IVd/12o, dated Mar 8, 1940. In German. 1.50

L 66263 Frames 1193-1195 — Process for preparing optically active pantothenic acid. Ger. patent application I.67615 IVd/12o, dated Aug 10, 1940. In German. 1.50

L 66264 Frames 1196-1197 — Process for manufacturing condensation products. Ger. patent application I.67635 IVc/12p, dated Aug 9, 1940. In German. 1.50

L 66265 Frames 1198-1200 — Process for manufacturing condensation products. Ger. patent application I.68043 IVd/12o, dated Oct 15, 1940. In German. 1.50

L 66266 Frames 1201-1202 — Process for producing acrylamide. Ger. patent application I.67648 IVc/12o, dated Aug 13, 1940. In German. 1.50

L 66267 Frames 1203-1207 — Plasticizers and elasticizers. Ger. patent application I.67662 IVc/39b, dated Aug 16, 1940. In German. 1.50

L 66268 Frames 1208-1210 — Plasticizers and elasticizers. Ger. patent application I.67663 IVc/39b, dated Aug 16, 1940. In German. 1.50

L 66269 Frames 1211-1216 — Process for producing fast colors. Ger. patent application I.67687 IVd/8m, dated Aug 21, 1940. In German. 1.50

L 66270 Frames 1217-1221 — Production of synthetic rubber. Ger. patent application I.67688 IVc/39c, dated Aug 21, 1940. In German. 1.50

L 66271 Frames 1222-1228 — Adhesives. Ger. patent application I.67704 IVc/22d, dated Aug 21, 1940. In German. 1.50

L 66272 Frames 1229-1233 — Mixtures containing chlorinated naphthalenes. Ger. patent application I.67705 IVc/22i, dated Aug 21, 1940. In German. 1.50

L 66273 Frames 1234-1237 — Process for producing chromium-containing azo dyes. Ger. patent application I.67706 IVd/22a, dated Aug 22, 1940. In German. 1.50

L 66274 Frames 1238-1241 — Process for producing distyrene. Ger. patent application I.67707 IVd/12o, dated Aug 22, 1940. In German. 1.50

L 66275 Frames 1242-1243 — Filling material for electric high-tension installations. Ger. patent application I.67712 VIIIb/21c, dated Aug 26, 1940. In German. 1.50

L 66276 Frames 1244-1249 — Production of factice-like plasticizers. Ger. patent application I.67744 IVc/39b, dated Aug 29, 1940. In German. 1.50

L 66277 Frames 1250-1254 — Process for reclaiming rubber. Ger. patent application I.67757 IVc/39b, dated Aug 30, 1940. In German. 1.50

L 66278 Frames 1255-1258 — Process for reclaiming synthetic rubber. Ger. patent application I.67758 IVc/39b, dated Aug 30, 1940. In German. 1.50

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L 66444 Frames 1996-2002 — Process for vegetative reproduction of plants. Ger. patent application I.69274 III/45f, dated Apr 1, 1941. In German. 1.50

L 66445 Frames 2003-2006 — Process for manufacturing condensation products. Ger. patent application I.69300 IVc/12p, dated Apr 3, 1941. In German. 1.50

L 66446 Frames 2007-2009 — Thread brake for textile machinery. Ger. patent application I.69344 VII/86a, dated Apr 9, 1941. In German. 1.50

L 66447 Frames 2010-2014 — Process and device for spraying plastic material, particularly viscous pastes. Ger. patent application I.69322 XII/75a, dated Apr 5, 1941. In German. 1.50

L 66448 Frames 2015-2019 — Manufacture of plywood. Ger. patent application I.69324 XII/38c, dated Apr 5, 1941. In German. 1.50

L 66449 Frames 2020-2024 — Process for matting structures of regenerated cellulose or cellulose derivatives with colored pigments. Ger. patent application I.69376 IVd/8m, dated Apr 4, 1941. In German. 1.50

L 66450 Frames 2025-2029 — Process for producing carboxylic acid amide compounds. Ger. patent application I.69347 IVd/12p, dated Apr 7, 1941. In German. 1.50

L 66451 Frames 2030-2033 — Plasticizer for polyvinyl chloride. Ger. patent application I.69336 IVc/39b, dated Apr 5, 1941. In German. 1.50

L 66452 Frames 2034-2037 — Process for vulcanizing synthetic rubber onto metals. Ger. patent application I.69337 IVc/39b, dated Apr 7, 1941. In German. 1.50

L 66453 Frames 2038-2039 — Process for joining chromium-plated objects by welding. Ger. patent application I.69323 Ib/49h, dated Apr 5, 1941. In German. 1.50

L 66454 Frames 2040-2042 — Process for production of heterocyclic compounds. Ger. patent application I.69351 IVc/12q, dated Apr 8, 1941. In German. 1.50

L 66455 Frames 2043-2047 — Production of active alumina. Ger. patent application I.69380 IVb/12m, dated Apr 16, 1941. In German. 1.50

L 66456 Frames 2048-2053 — Doubling of textiles, paper, leather and other material. Ger. patent application I.69377 IVc/39b, dated Apr. 12, 1941. In German. 1.50

L 66457 Frames 2054-2056 — Process for spinning cupric ammonium cellulose solutions. Ger. patent application I.69379 IVc/29b, dated Apr 12, 1941. In German. 1.50

L 66458 Frames 2057-2058 — Cooling of chlorine gas. Ger. patent application I.69417 IVb/12i, dated Apr 21, 1941. In German. 1.50

L 66459 Frames 2059-2064 — Process for producing vat dyes of the anthraquinone series. Ger. patent application I.69439, IVd/22b, dated Apr 24, 1941. In German. 1.50

L 66460 Frames 2065-2068 — Process for producing aldehydes. Ger. patent application I.69438 IVc/12o, dated Apr 23, 1941. In German. 1.50

L 66461 Frames 2069-2070 — Process for producing pyridine. Ger. patent application I.69440 IVc/12q, dated Apr 24, 1941. In German. 1.50

L 66462 Frames 2071-2075 — Process for reducing the light sensitivity of sulfuric acid esters of leuko vat dyes. Ger. patent application I.69511 IVd/22b, dated Apr 30, 1941. In German. 1.50

L 66463 Frames 2076-2080 — Process for preparing halogenarylmercapatans. Ger. patent application I.69512 IVd/12o, dated Apr 30, 1941. In German. 1.50

L 66464
Frames
2081-2086

Process for manufacturing condensation products. Ger. patent application I.69515 IVc/39c, Apr 30, 1941. In German. 1.50

L 66465
Frames
2087-2087A

Process for producing fibers and threads with improved qualities from cupric ammonium cellulose solutions. Ger. patent application I.69471 IVc/29b, Apr 26, 1941. In German. 1.50

L 66466
Frames
2088-2089

Process for producing threads or fibers from regenerated cellulose. Ger. patent application I.69470 IVc/29b, dated Apr 26, 1941. In German. 1.50

L 66467
Frames
2090-2092

Process for obtaining phenols from hydrocarbons containing phenol or from phenols containing hydrocarbons. Ger. patent application I.69473 IVc/12q, dated Apr 28, 1941. In German. 1.50

L 66468
Frames
2093-2095

Process for producing stable solutions. Ger. patent application I.69514 IVc/12p, dated Apr 30, 1941. In German. 1.50

L 66469
Frames
2096-2097

Process for producing a vat dye. Ger. patent application I.69515 IVd/22b, Apr 30, 1941. In German. 1.50

L 66470
Frames
2098-2100

Process for producing rubberlike mixed polymerizates. Ger. patent application I.68471 IVc/39c, dated Dec 17, 1940. In German. 1.50

L 66471
Frames
2101-2103

Process for producing unsaturated thioethers. Ger. patent application I.68694 IVd/12o, dated Jan 18, 1941. In German. 1.50

L 66472
Frames
2104-2105

Device for redirecting the thread bundle in the extension spinning process. Ger. patent application I.69574 VII/29a, dated May 10, 1941. In German. 1.50

L 66473
Frames
2106-2108

Process for production of infusion solutions suitable as substitutes for blood serum. Ger. patent application I.69197 IVa/30h, dated Mar 20, 1941. In German. 1.50

L 66474
Frames
2109-2113

Process for a liquid seed steep. Ger. patent application I.69576 IVa/45 l, dated May 10, 1941. In German. 1.50

L 66475
Frames
2114-2121

Process and apparatus for a short-time treatment of sensitive material with gaseous agents. Ger. patent application I.69482 IVa/12a, dated Apr 24, 1941. In German. 1.50

L 66476
Frames
2122-2124

Process for purifying ketones. Ger. patent application I.69472 IVc/12o, dated Apr 26, 1941. In German. 1.50

L 66477
Frames
2125-2130

Rodenticides. Ger. patent application I.69544 IVa/45 l, dated May 8, 1941. In German. 1.50

L 66478
Frames
2131-2132

Easily acetylated cellulose. Ger. patent application I.69559 IVc/12o, dated May 9, 1941. In German. 1.50

L 66479
Frames
2133-2134

Process for finishing artificial fibers. Ger. patent application I.69590 IVd/8k, dated May 9, 1941. In German. 1.50

L 66480
Frames
2135-2136

Process for accelerating the souring of milk and milk products. Ger. patent application I.69575 IVa/53e, dated May 9, 1941. In German. 1.50

L 66481
Frames
2137-2138

Process for thermal splitting of malic acid esters or their acyl compounds. Ger. patent application I.69646 IVd/12c, dated May 7, 1941. In German. 1.50

L 66482
Frames
2139-2140

Process for producing threads and fibers of ammoniacal cupric oxide cellulose solution. Ger. patent application I.69524 IVc/29b, dated May 2, 1941. In German. 1.50

L 66483
Frames
2141-2143

Process for producing vat dyes. Ger. patent application I.69523 IVd/22b, dated Apr 30, 1941. In German. 1.50

L 66484
Frames
2144-2145

Process for obtaining pyrocatechol. Ger. patent application I.69535 IVc/12q, dated May 3, 1941. In German. 1.50

L 66485
Frames
2146-2147

Process for obtaining bivalent phenols. Ger. patent application I.69536 IVc/12q, dated May 3, 1941. In German. 1.50

L 66486
Frames
2148-2150

Process for producing N-acylated beta-aminoethylmethyl ketones. Ger. patent application I.69591 IVc/12o, dated May 10, 1941. In German. 1.50

L 66487
Frames
2151-2152

Process for producing addition compounds. Ger. patent application I.69540 IVc/12o, dated May 6, 1941. In German. 1.50

L 66488
Frames
2153-2154

Obtaining of yeast. Ger. patent application I.69545 IVa/6a, dated May 5, 1941. In German. 1.50

L 66489
Frames
2155-2157

Promoting the growth of plants. Ger. patent application I.69557 IVb/16, dated May 8, 1941. In German. 1.50

L 66490
Frames
2158-2168

Recovery of ammonia and heat from used precipitating liquor in artificial copper silk process. Ger. patent application I.69664 IVc/29b, dated May 22, 1941. In German. 1.50

L 66491
Frames
2169-2174

Polyurethanes. Ger. patent application I.69558 IVc/12o, dated May 8, 1941. In German. 1.50

L 66492
Frames
2175-2176

Process for producing cellulose wool. Ger. patent application I.69677 IVc/29b, dated May 10, 1941. In German. 1.50

L 66493
Frames
2177-2178

Process for conveying copper in a circulatory flow in artificial copper fiber production. Ger. patent application I.69615 IVc/29b, dated May 15, 1941. In German. 1.50

L 66494
Frames
2179-2181

Production of luminous paints containing zinc sulfide. Ger. patent application I.69613 IVb/

22f, dated May 15, 1941. In German. 1.50

L 66495 Frames 2182-2186 — Method and device for rectification. Ger. patent application I.69638 IVa/12c, dated May 19, 1941. In German. 1.50

L 66496 Frames 2187-2192 — Rubber packing for rotary furnace. Ger. patent application I.69724 VI/40a, May 19, 1941. In German. 1.50

L 66497 Frames 2193-2195 — Process for producing threads, fibers, etc., from ammoniacal cupric oxide cellulose solutions by the extension spinning method. Ger. patent application I.69578 IVc/29b, dated May 12, 1941. In German. 1.50

L 66498 Frames 2196-2206 — Process for producing polyene aldehydes. Ger. patent application I.69612 IVd/12c, dated May 14, 1941. In German. 1.50

L 66250 — Index of patent applications of the Leverkusen office, 1939-1941, contained on Reel Pats 156. 3.50

PB L 19921. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Patent applications from the Photo and Artificial Silk Patent Division, Wolfen, 1942-1943. (FIAT Microfilm Reel Patents 145) Mar 1946. 988 f. Price: Microfilm-$6.00 - Enlargement print-$99.00.
FIAT microfilm Reel Patents 145 is the fifth in a series of six reels containing the patent applications of the I. G. Farben plant at Wolfen. The first four reels have appeared in previous issues. (See PB 19925 on page 211, PB 19924 on page 364 and PB 19923 on page 821 of volume 3, and PB 19922 on page 322 of volume 4.) The items in this reel, covering generally the period between October 1942 and December 1943 pertain to photography (black-and-white and color emulsions, dyes, cameras, enlargers, motion pictures and sound tracks) to devices and methods for the production of rayon fibers, to polymers, especially polyamides and their conversion into useful forms and to plasticizers and solvents. These items are available individually; brief abstracts and their respective PB numbers appear below. In German.

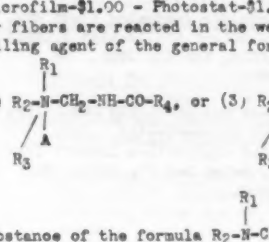
PB L 45624. JOINT INTELLIGENCE OBJECTIVES AGENCY. Patent applications from the Photo and Artificial Silk Patent Division, Wolfen, Index 1942-1943. (Index to Enlargement Print of FIAT Microfilm Reel 145, PB 19921) Mar 1946. 32 p. Price: Microfilm-$1.00 - Photostat-$3.00
This index contains PB numbers, German and English titles, frame numbers, and application dates and numbers for the individual patent applications comprising FIAT Microfilm Reel Patents 145, PB 19921.

PB L 45625. DEUTSCHE CELLULOID-FABRIK A. G., EILENBURG, GERMANY. Process for hardening phenol-aldehyde resins capable of being hardened in the cold. (Patent application D 88 860 IVc/39b) (Enlargement Print of Frames 4471-4473 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 3 p.
Price: Microfilm-$1.00 - Photostat-$1.00
The stability of phenol resin-varnishes can be increased if 10% of "dimethanesulfonlyimide," "Dimesylimid," alone or in mixture with other hardening agents is added to the phenol resins. In addition the resins can contain polyamides. In German.

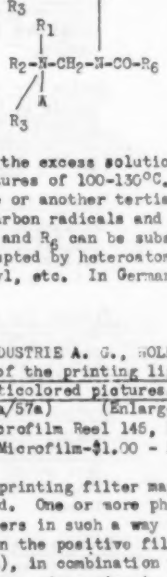
PB L 45626. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparing polyamides. (Patent application I 73 284 IVc/39c) (Enlargement Print of Frames 4474-4478 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 5 p.
Price: Microfilm-$1.00 - Photostat-$1.00.
Amino compounds with two H-containing basic N-atoms are reacted in the presence of heat with N,N'-acylene-bis-lactams which are derived from non-polymerizable mononuclear lactams. Besides the above compounds other bifunctional substances are used which form polyamides alone or together with diamines without the formation of water. The number of the amino groups and that of the additional modified carboxyl groups should be approximately equivalent. Polyamide forming lactams should be present or form by separation, preferably in the presence of an anhydrous alkaline catalyst. In German.

PB L 45627. DEUTSCHE CELLULOID-FABRIK A. G., EILENBURG, GERMANY. Process for the bonding of thermoplastic aggregates to surfaces of other materials. (Patent application D 88 896 XII/39a) (Enlargement Print of Frames 4479-4483 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 5 p.
Price: Microfilm-$1.00 - Photostat-$1.00.
Thermoplastics are employed the hardening temperature of which is below the freezing point of the material to which it is to be bonded. An elastic cement, i.e., a solution of polyisobutylene in styrene, is used as bonding material. Bonding is achieved by heating. In German.

PB L 45628. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for rendering water repellent qualities to natural or synthetic threads and fibers. (Patent application I 73292 IVd/8k) (Enlargement Print of Frames 4484-4490 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 7 p.
Price: Microfilm-$1.00 - Photostat-$1.00.
Threads or fibers are reacted in the wet state with solutions of a repelling agent of the general formulas (1) $OH-CH_2-NH-CO-R_4$, (2) $R_2-N(R_1)-CH_2-NH-CO-R_4$, or (3) $R_2-N(R_1)-CH_2-O-R_4$ together



with a substance of the formula $R_2-N(R_1)-CH_2-N(R_5)-CO-R_4$



After treatment and removal of the excess solution the material is dried and heated to temperatures of 100-130°C. N, R_1, R_2, R_3 as a unit stand for pyridine or another tertiary amine. R_4, R_5 and R_6 stand for hydrocarbon radicals and A for a monovalent acid anion. R_4, R_5 and R_6 can be substituted and the carbon chain can be interrupted by heterostoms or atom groups such as O, S, NH, N-alkyl, etc. In German.

PB L 45640. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for the determination of the printing light color (or intensity) in printing multicolored pictures. (Patent application I 73311 IIa/57a) (Enlargement Print of Frames 4491-4495 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
An exact determination of the printing filter may be accomplished by the following method. One or more photocells are combined with three color filters in such a way that any composition of the light acting on the positive film (leading to a neutral gray reproduction), in combination with the photocells and the three filters, gives rise to photoelectric currents that are in a mutually constant relation. In other words, two color segments which are reproduced non-identically on the positive film must consequently show a different relation of the photoelectric currents. On the other hand, dyestuff combinations with equal relation of photoelectric currents must appear in identical colors on the film. Consequently, in order to determine the quality of the printing light the photography of a gray pattern is compensated by correction filters in such a way that the photoelectric currents measured (with a system of photocells and filters) in correspondence to the number of color components are in constant interrelation fixed for the printing material. In German.

PB L 45629. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Case for photographic cameras and instruments. (Patent application I 73310 IXa/42h) (Enlargement Print of Frames 4496-4500 FIAT Microfilm Reel 145, PB 19921) Oct 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The case for the photographic apparatus is supplied with legs which are screwed to the case. Other attachments to the case are listed. In German.

PB L 45630. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of subtractive multicolored pictures by printing a color negative on positive material. (Patent application I 73322 IVa/57b) (Enlargement Print of Frames 4501-4504 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Material for the negative is used for which the position of the maximum of the absorption curve of the dye, especially of the purple dye, differs from the position of the maximum of the absorption curve of the dye of the material for the positive. The maximum of the absorption curve for the negative material shall be shifted in the direction of longer wave lengths, while both materials are sensitized in such a manner that the maxima of sensitization of the positive material coincide with the maxima of absorption of the dye of the negative material. In German.

PB L 45631. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of nitrogen-containing polycondensation products. (Patent application I 73395 IVc/39c) (Enlargement Print of Frames 4505-4507 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 3 p. Price: Microfilm$1.00 - Photostat-$1.00.
In the presence of a solvent or diluent, phosgene is reacted with the halogen acid of aminoalcohols or aminothioalcohols which have amino- and hydroxyl- or mercapto- groups linked to the saturated carbon atoms and which have also at least four chain-forming atoms between the terminal reactive groups. The product is condensed by heating. In German.

PB L 45632. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for improving the properties of shaped bodies made from polyacrylo-nitrile and acrylo-nitrile copolymers. (Patent application I 73397 IVc/39b) (Enlargement Print of Frames 4508-4510 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
After shaping, films, fibers or other molded bodies made of polyacrylonitrile are treated in aqueous alkalies or acid solutions or vapors. These solutions can also contain additions of wetting and swelling agents, dyestuffs, non-dissolving organic liquids or, if necessary, neutral salts. In German.

PB L 45633. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for improving the properties of shaped products. (Patent application I 73396 IVc/39b) (Enlargement Print of Frames 4511-4513 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Films and fibers consisting of polyacrylonitrile or its copolymers are improved by treating these substances in solution, or when already shaped into aggregates, with aldehydes, preferably formaldehyde, or with such compounds as react similar to formaldehyde. This treatment may be carried out in the presence of catalysts. In German.

PB L 45634. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for polymerization of lactams of ω-amino carboxylic acids. (Patent application I 73398 IVc/39c) (Enlargement Print of Frames 4514-4518 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Using alkaline substances, which begin reactions, cyclic amides of aminocarboxylic acids with seven or more ring members are quickly transformed into the highly polymeric state if the melted lactam heated to the temperature of polymerization is thoroughly washed and rinsed with an anhydrous indifferent gas. In German.

PB L 45635. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of polyurethan compounds. (Patent application I 73422 IVc/39c) (Enlargement Print of Frames 4519-4525 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
S-alkyl esters of glycol-bis-monothiocarbonic acid of the general formula -S-CO-R-OC-S- in which the free valences

are linked to the S like esters and R stands for a bivalent organic group (if necessary broken by heteroatoms or groups) are reacted with amino compounds which have at least two H-containing basic N-atoms, preferably with two amino groups. In German.

PB L 45636. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of high polymers with amide groups in the chain. (Patent application I 73421 IVc/39c) (Enlargement Print of Frames 4526-4533 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Difunctional substances or mixtures of substances which contain about equivalent amounts of hydroxyl- (mercapto-) and, if necessary, amino groups on the one hand, and S-ester groups of monothiocarbamic acid on the other are heated to decomposition temperature. In German.

PB L 45637. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of nitrogen-containing glycols. (Patent application I 73449 IVc/12qu) (Enlargement Print of Frames 4534-4538 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
New nitrogen-containing glycols or dimercaptans which have manifold applications are obtained if amino-alkanols or -thiols, especially those with three or more C-atoms between N-atom and hydroxyl- or mercapto-group are reacted with (1) chloride esters of glycol-bis-carbonic acid or (2) their sulfur analogues or (3) similarly-reacting esters of glycol-bis-carbonic acid with aromatic or enolic hydroxyl compounds or (4) with mercaptans. In German.

PB L 45638. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for shaping high polymers, especially polymers of acrylonitrile. (Patent application I 72617 IVc/29b) (Enlargement Print of Frames 4539-4540 of FIAT Microfilm Reel 145, PB 19921) Jul 1942. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00.
By use of cyclic carbonates of polyvalent aliphatic alcohols or polyvalent phenols as solvents or plasticizers, high polymers, especially polymers of acrylonitrile, can be easily molded. The cyclic carbonates can also be used in mixture with other suitable solvents and plasticizers. In German.

PB L 45641. I. G. FARBENINDUSTRIE A. G.. Device for manufacture of stretchable fiber band from bands of synthetic fiber. (Patent application I 73348 VII/76b. Addition to German patent application I 59065 and I 61884, both VII/76b) (Enlargement Print of Frames 4541-4542 of FIAT Microfilm Reel 145, PB 19921) n. d. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00.
This application describes a drawing-off device which takes the form of a drum with attachments. In German.

PB L 45639. I. G. FARBENINDUSTRIE A. G. Device for manufacture of stretchable fibe- band from bands of synthetic fiber. (Patent application I 73407 VII/76b. Third addition to German patent application I 59065 and I 61884, both VII/76b) (Enlargement Print of Frames 4543-4544 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00.
As drawing-off device, a roller provided with pins is used the pins of which pass through the holes of a leather conveyor on which by synchronization with another conveyor, arranged above the first one, the cut threads are conveyed. In German.

PB L 45642. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process and device for recovery and purification of carbon

disulfide. (Patent application I 73293 IVb/121) (Enlargement Print of Frames 4545-4556 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The object is to recover and purify carbon disulfide which escapes from freshly precipitated viscose upon washing with hot water. The principle is the collection of the vapors in an air-tight space and their liquefaction in a condenser. The condensed carbon disulfide is separated from sulfur, steam and the accompanying vapors in an explosion-proof space. Subsequently it is purified by treatment with sodium lye and water. By means of this process it is possible to save 30 percent of the carbon disulfide used for the production of viscose. In German.

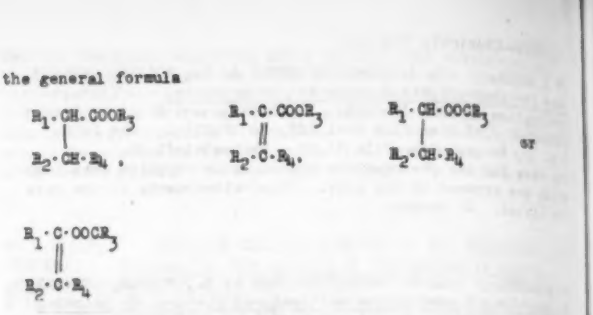
PB L 45643. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Lighting system for printing apparatus. (Patent application I 73484 IXa/57c) (Enlargement Print of Frames 4557-4563 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The object is a satisfactory uniform illumination of the printing surface with diffuse light, which may be weakened or colored as desired. The rays of a light source are collected through a condenser into a parallel beam, which serves for the illumination of a diffusing screen, from where the light falls on the printing surface. Any light balancing devices, such as diaphragms or color filters, may be interposed between light source and diffusing screen without interfering with the uniformity of the illumination of the printing surface. In German.

PB L 45644. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for making half-tone reproductions from black-white and/or colored patterns. (Patent application I 73584 IVa/57d) (Enlargement Print of Frames 4564-4566 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
For such photography photographic material is used as possesses a gradual rise in the blackening of the highlights and a steep rise in the recording of the shadows. In German.

PB L 45645. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for improving surfaces by applying solid substances through evaporation. (Patent application I 73574 VIb/32b) (Enlargement Print of Frames 4567-4568 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00.
From the powdery material serving for the coating a preliminary form is made. For this purpose the powder is mixed with water to form a viscous pulp; this is placed into molds and subsequently dried and vitrified. The resulting forms are used for complete evaporation. Such processes are followed in the production of reflection-reducing layers on glass plates or lenses. In German.

PB L 45646. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Multilayer negative or reversible material for substantive color photography with overlapping sensitization for the single layers. (Patent application I 73639 IVa/57b) (Enlargement Print of Frames 4569-4571 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
For the preparation of such material stabilization of the overlapping is achieved by the following procedure. The emulsion layers are additionally sensitized in the areas where the maximum of sensitization lies. The red sensitive layer is additionally sensitized for yellow, the green sensitive layer for yellow and blue green, and the blue sensitive layer for blue green. In German.

PB L 45647. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for applying protein layers such as gelatin, particularly of the photographic type. (Patent application I 73668 IVa/57b) (Enlargement Print of Frames 4572-4575 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
To the solutions for the pouring process are added, besides the usual photographic admixtures, additional substances of the general formula



R_1 to R_4 can represent radicals at least one of which contains a carbon chain of 6 to 14 atoms while the others may be any radical. In German.

PB L 45647. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparing fixing baths for color photographs that have undergone chromogenic development. (Patent application I 73688 IVa/57b) (Enlargement Print of Frames 4576-4578 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The troublesome separation of sulfur-containing silver compounds in fixing baths for color photographs may be prevented by the addition of small amounts of water-soluble aliphatic or aromatic sulfinic acids. The pH value of the sulfinic acid must be between 5 and 7. If the fixing bath contains alum, sodium acetate or similar chemicals should be added in order to avoid separation of aluminum hydroxide. In German.

PB L 45648. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of hydrophilic polyurethans. (Patent application I 73515 IVc/12o) (Enlargement Print of Frames 4579-4586 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Hydrophilic polyurethans from chloride esters of glycol-biscarbonic acid and compounds with two hydrogen-containing basic nitrogen atoms are obtained by using at least in part amino compounds with tertiary basic nitrogen in the molecule. The final product should have such a content of tertiary basic nitrogen that it still dissolves in hot diluted acetic acid but not, or only incompletely in the cold acid. In German.

PB L 45649. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Worm press for shaping of high polymers. (Patent application I 73521 XII/39a) (Enlargement Print of Frames 4587-4591 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The object is a worm press for the forming of thermoplastic high polymers which is so constructed that the press mass is retained in the hottest zone of the pressure head only for a very short time. This worm press is characterized by the following features. The injection head is composed of a filter, a nozzle plate with perforations, and a heater surrounding the injection head. In German.

PB L 45650. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for reduction of light reflection from glass surfaces. (Patent application I 73575 VIb/32b) (Enlargement Print of Frames 4592-4594 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The surface of the glass may be given an effective coating by applying a mixture of lithium fluoride and aluminum fluoride by evaporation. The two chemicals are fused together and the fusion is dried to form a powder. After the glass has been coated, it is subjected to prolonged heat treatment whereby the coating is made hard and resistant. In German.

PB L 45651. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparation of polyamides. (Patent application I 73585 IVc/39c) (Enlargement Print of Frames 4595-4604 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Polyamides are prepared by condensation of polyamide-forming di- or polyfunctional ester compounds of carboxylic acid

and/or amino compounds, in which the acid carbonyl groups are at least in part linked to mercaptans. The mixtures of reaction must contain components with tertiary basic nitrogen. Lactams are copolymerized. In German.

PB L 45652. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for curling threads and fibers from polyurethans. (Patent application I 73614 IVe/29b) (Enlargement Print of Frames 4605-4607 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Polyurethan threads and fibers can be curled and at the same time delustered by treating them with acids and acid chlorides. If necessary, the acids and acid chlorides can be removed from the fibers by washing. In German.

PB L 45653. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparation of polysulfonamides. (Patent application I 73621 IVc/39c) (Enlargement Print of Frames 4608-4615 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Amino compounds with two hydrogen-containing amino groups are reacted with disulfonyl chlorides, preferably ω,ω'-disulfonyl chlorides, in amides or sulfones as solvents and amine is used as the substance which combines with acids. Large amounts of sulfonyl chlorides are used; at the end of the reaction the excess sulfonyl chloride groups are thermally decomposed into alkyl halide groups. In German.

PB L 45654. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Continuous printing machine for color films. (Patent application I 73306 IXa/57a) (Enlargement Print of Frames 4616-4621 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The source of light is arranged inside of the cylinder carrying the filter. The cylinder conveying the film is concentric to the filter-cylinder and is provided with dents. A third cylinder is concentric between the source of light and the filter-cylinder and carries the diaphragm. Glass lenses are arranged in the circumference of the filter-cylinder. In German.

PB L 45656. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Automatic device for the treatment of photographic materials. (Patent application I 73375 IXa/57a) (Enlargement Print of Frames 4622-4625 of FIAT Microfilm Reel 145, PB 19921) Oct 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Two pairs of endless chains convey the photographic material which may be in the form of ribbons or sheets. One pair of the chains receives the material after exposure and delivers it to the second pair of chains which conveys it through the various baths. An adjusting cylinder is arranged within the path of the first pair of chains to bridge the time of exposure which interrupts the continuous course of the conveying system. In German.

PB L 45657. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for continuous polymerisation of lactams. (Patent application I 73659 IVc/39c) (Enlargement Print of Frames 4626-4630 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
With the help of a diagram a device is described by means of which lactams with more than six members are continuously polymerized by addition of water-separating accelerators, such as linear polyamide-forming aminocarboxylic acids and/or salts of diaminodicarboxylic acids. With stirring, the polyamide-forming starting material is melted and continuously introduced into a vessel shaped as a heating tube through which it passes in 10-60 minutes. In German.

PB L 45658. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for finishing fibers and fiber products. (Patent application I 73677 IVd/8k) (Enlargement Print of Frames 4631-4640 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Polyamide-, Polyurethane-, and polyurea-fibers and fiber products can be improved by treatment with hot aqueous solutions of carboxylic acids which dissolve only slightly or with difficulty at room temperature. Weak bases should be present which are not strong enough to neutralize the acids. The aqueous baths can also contain dyes, dye-components or dyestuff-derivatives with acid groups, and tannin or similar phenolic polyhydroxyl compounds of high molecular weight. In German.

PB L 45659. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparation of nitric acid and nitrating acid free from nitric oxide. (Patent application I 73733 IVb/121) (Enlargement Print of Frames 4641-4644 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Fuming nitric acid and nitrating acid can be completely freed from nitric oxide by adding to them such amounts of alkali permanganates or permanganates of the alkaline earth metals which will completely oxidize the nitric oxide to nitric acid. Manganese present in the nitric acid is precipitated by addition of concentrated sulfuric acid. In German.

PB L 45660. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for prevention of colored halos in color developing of multilayer material for color photography which contain silver filter layers. (Patent application I 73754 IVa/54b) (Enlargement Print of Frames 4645-4648 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
To the layers reduction agents are added. These reduction agents are formed by condensation or polycondensation of aromatic dihydroxy compounds having the OH groups in ortho-, para- or peri-position with phenols or terpenes. The aromatic dihydroxy compounds, the phenols and the terpenes can be substitution products and the dihydroxy compounds can contain methylol groups. In German.

PB L 45661. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparation of molded bodies. (Patent application I 73736 IVc/39b) (Enlargement Print of Frames 4649-4652 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Molded bodies, especially coatings, films or hollow bodies shaped by dipping, are prepared from pastes of polymeric substances finely dispersed in a mixture of liquids. This mixture, which must not dissolve the polymer up to temperatures of 60°C., must consist of two or more components. At least one of these components must be a solvent for the polymer and one a non-solvent which boils at a lower temperature than the solvent or the solvent mixture and must be miscible with it in any ratio. In German.

PB L 45662. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preventing linear high polymers with amide groups in the chain from becoming brittle. (Patent application I 73767 IVc/39b) (Enlargement Print of Frames 4653-4656 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Polyamides, polyurethans, or polyureas will not become brittle under the influence of heat or light if small amounts of N-aryl substituted secondary aromatic di- or polyamines are added to them during or after their preparation or molding. In German.

PB L 45663. DEUTSCHE CELLULOID-FABRIK, EILENBURG, GERMANY. Process for preparation of plastic materials from cellulose esters. (Patent application D. 89428 IVc/39b) (Enlargement Print of Frames 4657-4659 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Cellulose esters (especially acetone-soluble cellulose acetate) are cold-plasticized in alcohols (especially ethylalcohol) with a solution of doubly substituted cyanamides the substituents of which are aryl- or hydroaryl-groups. In German.

PB L 45664. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparing ω-aminocarboxylic acids. (Patent application I 73809 IVc/12qu) (Enlargement Print of Frames 4660-4662 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
ω-Aminocarboxylic acids can be obtained from cyclic lactams which are decomposed with an organic acid that forms an insoluble calcium salt. The acid is then separated as the calcium salt. In German.

PB L 45665. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for finishing fibrous materials weighted with polyphenols, especially tannin and tannin-like substances. (Patent application I 73889 IVd/8k) (Enlargement Print of Frames 4663-4668 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00.
These fibrous materials made of synthetic polyamides are treated with polyvalent alkylating agents (especially alkylene-oxides, -imines, - imides, halogens methyl ethers, and halogen methyl amides), with salt-like compounds which on heating easily dissociate with formation of alkylating agents, or with aliphatic diazo-compounds at proper temperatures. Another heat treatment may be necessary. In German. For other applications on finishing of polyamides, see I 72756 (PB 45599) and I 72767 (PB 45600), abstracted on p. 347, v. 4.

PB L 45666. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Cylindrical roll with internal heating. (Patent application I 73629 VII/8b) (Enlargement Print of Frames 4669-4672 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Within a cylindrical roll a stationary ring-shaped heating body is arranged in such a manner that the cylinder rotates around the heater. The heat is transferred by a heat exchange fluid or oil. The gap between the heater and cylinder is adjusted to the viscosity of the oil. Such rollers are used in the manufacture of textiles or paper. In German.

PB L 45667. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process and device for wet treatment of moisture-penetrable structures wound on spools. (Patent application I 73676 VII/8a) (Enlargement Print of Frames 4673-4677 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Plastic threads and fibers or other aggregates permeable to liquids and wound on spools are wet treated by using the pressure of the treating liquid to close and to press together the spool columns during this treatment. By stopping the inflow of the treating liquid, the spools are released. In German.

PB L 45668. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for dyeing structures made of polyvinyl chloride. (Patent application I 73979 IVd/8m) (Enlargement Print of Frames 4678-4679 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Threads, fabrics, ribbons and films of polyvinyl chloride are dyed by wetting them first with alkaline solutions of hydroxy alkyl celluloses or their ethers, such as the Tyloses. Then the wet aggregates are treated with solutions of acids or salts so as to precipitate a layer of the free hydroxyalkyl celluloses. Eventually they are dyed with cotton or rayon dyes. In German.

PB L 45669. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of dialysis membranes. (Patent application I 74009 IVb/12d. Addition to application I 66961 IVb/12d) (Enlargement Print of Frames 4680-4682 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Dialysis membranes for alkaline liquids are made of fabrics, felts, and paper-like sheets of high polymer hydrocarbons. The semipermeable membrane consists of precipitates of inorganic salts, oxides or hydroxides and is bonded to the high polymer hydrocarbons by means of hydroxyalkyl ethers of cellulose such as the Tyloses. For application I 66961, see PB 34571, p. 365, v. 3, this Bibliography. In German.

PB L 45670. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Device for short time measurements. (Patent application I 70069 VIIIb/85b) (Enlargement Print of Frames 4683-4689 of FIAT Microfilm Reel 145, PB 19921) Jul 1942. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Synchronous clocks are fed by an alternating current generator driven by a motor energized by a constant frequency system. The oscillations of a tuning fork, after amplification by a vacuum tube amplifier, are used for synchronizing a synchronous motor. This synchronous motor is coupled to the motor driving the generator. The a-c voltage of the synchronous motor serves as the source for the anode potential for the final stage of the amplifier. In German.

PB L 45671. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of basic heterocyclic glycols. (Patent application I 73925 IVd/12p) (Enlargement Print of Frames 4690-4692 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Compounds of the general formula HO-R'-NH-R-NH-R'-OH are reacted with aldehydes. In this formula R stands for a bivalent, if necessary substituted, hydrocarbon group with two (in an aliphatic chain even with three) carbon atoms between the two nitrogen atoms; R^1 stands for bivalent hydrocarbon groups with at least two C-atoms, which at the distance of at least two C-atoms from the basic N can be interrupted by heteroatoms or groups such as O, S, -NHCO-, and $-NHSO_2-$.
In German.

PB L 45672. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of polyurethan compounds. (Patent application I 73924 IVc/39c) (Enlargement Print of Frames 4693-4696 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
In the presence of tertiary amines carbon oxysulfide is reacted with aminoalcohols or diamines. If diamines are used, there has also to be added the equivalent amount of a diprimary glycol. The whole is heated until all the hydrogen sulfide is separated. In German.

PB L 45673. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for shaping synthetic linear high polymers. (Patent application I 73926 IVd/29b) (Enlargement Print of Frames 4696-4701 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00.
High polymers with amide groups in the chain such as polyamides, polyurethans or polyureas, are shaped by being pressed together. Then, intermittently, and in the molten state, they are conveyed to a collecting receptacle from where the melt is withdrawn continuously for molding or shaping. A drawing is attached which shows such a receptacle. In German.

PB L 45674. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of condensation polymers. (Patent application I 73946 IVc/39c) (Enlargement Print of Frames 4702-4710 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Amino- and/or hydroxy- or mercaptocarboxylic acids, or their functional derivatives (esters, amides, lactams, lactones, and nitriles), which are capable of forming polycondensation products, are reacted with comparatively small amounts of resin-like polycarboxylic acids (especially polyvinyl carboxylic acids) at increased temperatures. The reaction can also be performed with such functional derivatives of these carboxylic acids as alone or in the presence of water are capable of forming amides or esters with the above bifunctional acids or their functional derivatives. In German.

PB L 45675. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for the sensitization of layers containing light-sensitive diazonium compounds. (Patent application I 73958 IVa/57b) (Enlargement Print of Frames 4711-4715 of FIAT Microfilm Reel 145, PB 19921) Dec 1942. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.

Dyes of the thio- and seleno-pyronine series are added to the emulsion layers. Moreover, thiosinamine or similar compounds are added which accelerate the bleaching of dyes in light. In German.

PB L 45676. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for the subsequent treatment of threads from linear high polymers. (Patent application I 74032 IVc/29b) (Enlargement Print of Frames 4714-4716 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
From threads of polyamides the parts consisting of low polymers which are soluble in water with difficulty are removed by treating the threads with hot water and then centrifuging. In German.

PB L 45677. I. G. FARBENIEDUSTRIE A. G., WOLFEN, GERMANY. Process for the manufacture of light filters. (Patent application I 74118 IVa/57b) (Enlargement Print of Frames 4717-4721 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Symmetrical or unsymmetrical carbocyanine dyes are used which are derived from such heterocyclic ring compounds as do not contain a carbon double bond. Frame 4718 is lacking. In German.

PB L 45678. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for the production of photographic positives by the reflex copying process. (Patent application I 74117 IVa/54b, Addition to application I 68718 IVa/57b) (Enlargement Print of Frames 4722-4725 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
To the positive gelatine layer a delusterant is added which is subsequently removed by the usual baths or by special bath treatment. The developing agent is added to the negative layer and the development done by alkali. For application I 68718 IVa/57b, see PB 34150, abstracted on p. 822, v.3, this Bibliography. In German.

PB L 45679. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for framing transparencies. (Patent application I 74170 IIa/42h) (Enlargement Print of Frames 4726-4727 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00.
A process is claimed for framing transparencies in frames of materials which have low mechanical resistance such as cardboard or thin metal sheets. The films and frames are covered with a lacquer, thus causing the film to shrink. The frame is stretched tightly while coating is applied and is kept tightly stretched until it is completely dried. In German.

PB L 45680. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preventing linear high polymers with amide groups in the chain from becoming brittle. (Patent application I 74045 IVc/39b) (Enlargement Print of Frames 4728-4732 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Addition of small amounts of very finely dispersed copper or inorganic or organic copper compounds to the polymers before, during, or after molding will stabilize them, that is, protect them against the harmful influences of heat, light and weather. Such polymers are those of the polyamides, polyurethans and polyureas. In German.

PB L 45681. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Optical system for sound tracks. (Patent application I 74090 IIa/42g) (Enlargement Print of Frames 4733-4736 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
While some types of sound film contain the sound tracks in a gelatine layer on top of the film proper, others contain it in the film itself. Thus the distance between sound track and optical system differs, thus causing distortions of the sound. A device is described which allows, by the movement of a lever, the establishment of the correct distance for one or the other kind of film, hereby permitting either kind to be used. This is explained by means of a drawing. In German.

PB L 45682. DEUTSCHE CELLULOID-FABRIK, EILENBURG, GERMANY. Process for shaping the surface of layers formed by aqueous solvent-free emulsions of high-polymeric substances. (Patent application D 89891 IVc/39b) (Enlargement Print of Frames 4737-4741 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The emulsion is applied to any support. While the emulsion is wet it is covered with a sheet of plastic having the desired shape. This is left to dry while covered with the mold. Subsequently the mold is removed. Emulsion polymers of the vinyl group are especially mentioned. In German.

PB L 45683. I. G. FARBENINDUSTRIE A G., WOLFEN, GERMANY. Preparation of 1,3-substituted thiohydantoins. (Patent application I 74242 IVc/12p) (Enlargement Print of Frames 4742-4747 of FIAT Microfilm Reel 145, PB 19921) Feb 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00.
N-mono-substituted amino acetamides, or their compounds with acids, are first condensed with substituted mustard oils in a neutral or alkalin medium. Then the acid amide group is hydrolyzed in an acid medium. In German.

PB L 45684. I. G. FARBENIEDUSTRIE A. G., WOLFEN, GERMANY. Process for finishing fibers and flat shapes from synthetic linear high polymers with amide groups in the chain. (Patent application I 74282 IVd/8k) (Enlargement Print of Frames 4748-4759 of FIAT Microfilm Reel 145, PB 19921) Feb 1943. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The products are treated with solutions or dispersions of aromatic di- or polyhydroxysulfones which are free from sulfonic acid groups and have a melting point over 150° C. If necessary, they must be treated with dry heat or dry steam. The solutions should contain bases which evaporate during the treatment. The subsequent finishing is done with polyvalent alkylating agents. In German.

PB L 45685. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for manufacturing curled threads, fibers, or ribbons from cellulose. (Patent application I 74370 IVc/29b, Addition to application I 66132 IVc/29b) (Enlargement Print of Frames 4760-4762 of FIAT Microfilm Reel 145, PB 19921) Feb 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Viscose is worked with a solution containing 6.5% alkali. If the spinning solution contains more than 6.5% alkali; the content of sulfuric acid of the bath is increased; if the content is less than 6.5% alkali; the content of sulfuric acid is also decreased. The highest concentration of sulfuric acid permissible is about 17% and the lowest concentration is about 4%. For application I 66132, see PB 31625, abstracted on p.220, v.3, this Bibliography. In German.

PB L 45686. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for registration of color processes. (Patent application I 74397 IVa/57b) (Enlargement Print of Frames 4763-4767 of FIAT Microfilm Reel 145, PB 19921) Feb 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The method uses a negative process for approximate recordings of colors of light sources, etc. Dyes are used which have maximum of transparency corresponding to the maximum of sensitization of the particular layer of the photographic emulsion. In German.

PB L 45687. DEUTSCHE CELLULOID-FABRIK A. G., EILENBURG, GERMANY. Preparation of solutions, pastes or plastic material from recovered cellulose acetate. (Patent application D 90089 IVc/22h) (Enlargement Print of Frames 4768-4770 of FIAT Microfilm Reel 145, PB 19921) Feb 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Mixtures of aliphatic or hydroaromatic alcohols and of partly or completely hydrogenated pyran compounds, containing the cyano-group as substituents, are used as solvent in the preparation of the above-mentioned materials. In German.

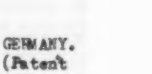
PB L 43905. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of multicolored pictures or of multicolored pictures from subtractive images. (Patent application I 74450 IVa/57b) (Enlargement Print of Frames 4771-4775 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
These are made by selective twofold exposure. One or more filter layers with diffusion-proof, ultraviolet light-absorbent substances are used and the second exposure or the second exposures are made from one side only with ultraviolet light. The diffusion-proof and ultraviolet light absorbent-substances must be stable against the influence of non-fixing silver solvents, especially against bichromate-sulfuric acid. In German.

PB L 45688. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process and device for plugging and opening storage and processing containers and conveyors. (Patent application I 74470 XII/39a) (Enlargement Print of Frames 4776-4779 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The invention concerns liquefiable synthetic materials such as polyamides. It is stated that the parts through which these substances pass in liquid form may be easily blocked by forming a plug by local cooling. Application of heat at the same spot will dissolve the plug and permit free flow. Several possible realizations of this principle are described and shown in 5 drawings. In German.

PB L 45689. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparing ε-caprolactam. (Patent application I 74471 IVe/12g) (Enlargement Print of Frames 4780-4782 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
ε-Caprolactam and its C-substituted derivatives are obtained if amides of ε-amino carboxylic acids, or of their lower acyl derivatives, are heated to decomposition temperature in the presence of alkaline substances and preferably under reduced pressure. If necessary, solvents and diluents have to be present. The lactams thus formed are distilled off. In German.

PB L 45690. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of colored wash-off relief pictures. (Patent application I 74520 IVa/57b) (Enlargement Print of Frames 4783-4785 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The colors of the relief are built up from their components during the usual steps of preparation. In German.

PB L 45691. DEUTSCHE CELLULOID-FABRIK A. G., EILENBURG, GERMANY. Process for storage and shipment of sheets made from polyisoolefins or having surfaces formed therewith. (Patent application D 90255 IVc/39b) (Enlargement Print of Frames 4786-4788 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Surfaces of polyisoolefins (such as polyisobutylene) are covered with a layer of hydrophilic polymers, such as sheets of cellulose hydrate, polyamides, polyvinyl alcohols, and polyvinyl acetals with free OH groups. In German.

PB L 45692. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for preparing blue-black picture tones, insensitive against contamination by fixing solutions, on silver chloride papers. (Patent application I 74543 IVa/57b) (Enlargement Print of Frames 4789-4791 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Thio ketones represented by the structure  wherein R stands for hydrogen, alkyl groups, aryl groups or aralkyl groups, form easily-soluble complex compounds with silver halides and keep their toning properties even under unfavorable working conditions. Frame 4792, containing the patent claim, is missing. In German.

PB L 45693. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Method for swell-proofing of cellulose hydrate fibers. (Patent application I 74607 IVd/8k) (Enlargement Print of Frames 4793-4798 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The method, a modification of known methods, consists of impregnation of the fibers with a solution containing formaldehyde, enough nitric acid for a pH of 2.5-1.1, and optionally ammonium nitrate as a catalyst; then the fibers are dried and heated over 70°C. In German.

PB L 45694. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of monochromatically tinted prints and transparencies. (Patent application I 74610 IVa/57b) (Enlargement Print of Frames 4799-4801 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
This process was performed by the use of a multilayer printing material. Each layer was sensitized differently and each contained different dye constituents. The prints were exposed with properly chosen light filters. This procedure plus the coloring substance permitted the production of monochromatic pictures. In German.

PB L 45695. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of artificial hair, bristles, threads, etc., from polyamides. (Patent application I 74611 IVe 29b) (Enlargement Print of Frames 4802-4804 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The quality of these polyamide objects could be greatly improved if they were immediately subjected to a stretching process after leaving the spinning machine. This process enabled the production of threads with a 50% higher degree of stiffness. The elasticity and gloss are also greatly improved. In German.

PB L 45696. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for improving the electrical conductivity of synthetic bristles from synthetic high polymeric substances. (Patent application I 74071 IVc/39b) (Enlargement Print of Frames 4805-4808 of FIAT Microfilm Reel 145, PB 19921) Jan 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The conductivity of such plastic bristles as polyamides, polyurethans, polyureas, polyvinyl chlorides, polyethylenes, etc., could be assured by the use of heavy metals or heavy metal compounds. The incorporation of the metals or metal compounds into the surface of the plastic bristle is attained by the use of swelling agents, such as formamide, acetic acid, acetone, tetrahydrofuran, and highly concentrated solutions of alkaline or alkaline earth thiocyanides. In German.

PB L 45697. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Process for finishing fibers made from linear high polymers with amide groups in the chain. (Patent application I 74355 IVd/8k) (Enlargement Print of Frames 4809-4810 of FIAT Microfilm Reel 145, PB 19921) Feb 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The fibers were treated with such solutions as would yield on evaporation a hard, solid flexible film. The solutions most suitable for this treatment were those of polyvinyl alcohols. In German.

PB L 45698. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Lighting system for printing or enlarging apparatus for production of colored prints. (Patent application I 74544 IXa/57b) (Enlargement Print of Frames 4811-4815 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00.
The coloring of the light is achieved by the use of movable filters. These are located next to the diaphragm of the condenser and are symmetrical and contain the three basic colors. The filters are in such a position that only a part of the beam is colored. For prior application, see PB 45643. In German.

PB L 45699. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of a duplicate negative from a multilayer color negative or multilayer color positive produced by means of a color developed and overlappingly sensitized negative material. (Patent application I 74666 IVa/57b) (Enlargement Print of Frames 4816-4819 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00.
This application explains a procedure in which multilayer complimentary colored negatives or color corrected positives are employed. Two graphs indicating the absorption curves of the maximums are included. In German.

PB L 45700. I. G. FARBENINDUSTRIE A. G., WOLFEN, GERMANY. Preparation of colored photographic prints and transparencies with the aid of derivatives of ω-cyanoacetophenone as color coupling components. (Patent application I 74691 IVa/57b) (Enlargement Print of Frames 4820-4829 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00.
Color forming agents of the following general formula were used: R-X-$COCH_2CN$. R represents any substituted aromatic group. X represents an aliphatic carbon chain of at least 2 C-atoms containing double or triple bonds and which can be aliphatically or aromatically substituted. In German.

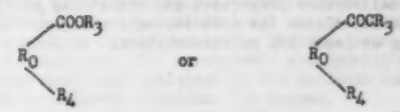
PB L 45701. I.G. FARBENINDUSTRIE A.G. Preparation of solutions of linear polymers with amide groups in the chain. (Patent application I 74740 IVc/39b) (Enlargement Print of Frames 4830-4843 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 14 p. Price: Microfilm-$1.00 - Photostat-$1.00
Valuable new hydroxymethyls. yielding stable solutions in comparatively diluted alcohol-water mixtures (especially mixtures of methanol and water) are obtained by the use of polyamides or mixed polyamides, containing tetramethylene diamine and its side chain homologues completely or in part as basic components, preferably together with comparatively short chained dicarboxylic acids, such as adipic acid or its homologues. (Waste products from bristle production are mostly used as raw material). The resulting compounds are capable of forming fibers, ribbons and films. 24 examples are given. This document is incomplete.
In German.

PB L 45702. I.G. FARBENINDUSTRIE A.G. Process and device for finishing artificial threads from synthetic linear high polymers. (Patent application I 74838 VII/29a) (Enlargement Print of Frames 4844-4847 of FIAT Microfilm Reel 145, PB 19221) Apr 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The fibers are stretched over a roller and over a brake rod. The roller moves around an axle mounted on springs. One drawing of the machine is included. In German.

PB L 45703. I.G. FARBENINDUSTRIE A.G. Preparation of polycarbanic acid compounds. (Patent application I 74772 IVc/39c) (Enlargement Print of Frames 4848-4859 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00
This patent describes the reactions producing polycarbanic acid compounds, such as polyurethans, polyureas and mixed polymers with reactive side chains from diisocyanates or from substances giving analogous reactions, i.e. diazides or isothiocyanates. It contains especially descriptions of reactions with such glycols, aminoglycols or diamines having cyclic or linear acetal or mercaptal groups in the side chain. Four examples with detailed formulas are given.
In German.

PB L 45704. I.G. FARBENINDUSTRIE A.G. Preparation of substituted polyurethans from diisocyanates. (Patent application I 74779 IVc/39c) (Enlargement Print of Frames 4860-4868 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
This patent describes the production of substituted polyurethans from diisocyanates or from substances giving analogous reactions, i.e. dicarboxylic acid azides, dicarbanic acid arylesters. Very reactive starting materials to build up polyurethans are those diisocyanates and glycoles containing halogen or sulfonic acidester groups bound to a saturated carbon atom, or to an unsaturated carbon atom in alpha-position to a double bond. 25 reactive substances are listed. 3 examples are given.
In German.

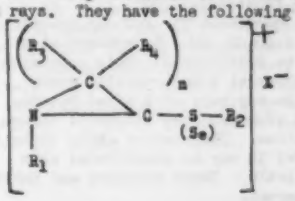
PB L 45705. I.G. FARBENINDUSTRIE A.G. Preparation of photographic light-sensitive or neutral material. (Patent application I 74782 IV/57b) (Enlargement Print of Frames 4869-4872 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Wetting agents, easing the casting process, are added to photographic emulsions. In former patents wetting agents containing condensation products of succinic anhydrides had been used for this purpose. This patent describes the use of compounds of the following general structure:



R_3 as well as R_4 represent any radical of which one, i.e. R_3 may have a carbon chain of 6 to 18 carbon atoms, while R_4 may be any radical, especially a carbonyl group (-COO Me) or hydrogen, hydroxyl, halogen metal or equivalents. R_0 represents a carbon chain of optional length and may have any kind of side chains. R_0 may also be absent. In this case the two groups $COOR_3$ and $COCR_3$ respectively may be linked together. 3 examples are given. In German.

PB L 45706. I.G. FARBENINDUSTRIE A.G. Preparation of photographic light-sensitive or neutral material. (Patent application I 74781 IVa/57b) (Enlargement Print of Frames 4873-4876 of FIAT Microfilm 145, PB 19921) Apr 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Wetting agents, easing the casting process are added to photographic emulsions. The substances used as wetting agents have a carbon chain of at least 8 carbon atoms and are insoluble or difficultly soluble in water. The use of these insoluble compounds as wetting agents in emulsions either for photographic or other purposes (i.e. as textile aids) is claimed to be basically new. 3 examples are given. In German.

PB L 45707. I.G. FARBENINDUSTRIE A.G. Preparation of methine dyes. (Patent application I 74819 IVd/22e) (Enlargement Print of Frames 4877-4882 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
This patent describes methine dyes used in photographic emulsions as light-filters to absorb especially ultra violet rays. They have the following general formula:



In the above formula n represents 3 to 6; R_1 and R_2 represent alkyl, aralkyl, aryl, acyl, or acyl ester; R_3 and R_4 represent H, alkyl, aralkyl and aryl, or heterocyclic compounds without N-atom such as furyl or thionyl groups. R_1 and R_3 may be linked. X may be any acid radical such as halogen, SO_4H, $C_2H_5SO_4$, toluene sulfonic acid, ClO_4, NO_3, SCN or zinc chloride complex salt. These compounds are reacted with substances containing reactive methyl or methylen groups. The reaction takes place in a neutral or slightly alkaline medium, if necessary with the addition of organic or inorganic bases. Five examples are given. In German.

PB L 45708. I.G. FARBENINDUSTRIE A.G. Process for molding polyacrylonitrile compounds. (Patent application

I 73203 IVc/39b) (Enlargement Print of Frames 4883-4892 of FIAT Microfilm Reel 145, PB 19921) Sep 1942. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
Polyacrylonitrile compounds and their mixed vinyl copolymers may be molded by conventional methods if they are treated with liquid or low melting sulfones before or during the process of molding. Sulfones with a low melting point or highly water soluble sulfones are most suitable, as they may be easily removed after the process if necessary. Thirteen examples and one diagram are given. In German.

PB L 45709. DEUTSCHE CELLULOID-FABRIK A.G., EILENBURG, GERMANY. Process for combining polyisobutylene sheets. (In addition to D 88408 IVc/39b) (Patent application D 90429 IVc/39b) (Enlargement Print of Frames 4893-4894 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
The main application described the joining of film foils of pure polyisobutylene on parts of their surfaces having the original surface properties and containing no fillers. This expansion claims the same method for filled films containing at least 15% polyisobutylene. In German.

PB L 45710. I.G. FARBENINDUSTRIE A.G. Slide valve. (Patent application I 74864 XII/47g) (Enlargement Print of Frames 4895-4897 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The object of this patent is an air-tight slide valve, constructed of thin metal, mainly for air pipes and the like. The essential feature consists of two movable shut-off plates. These are pressed tightly against the walls of the container without gliding movement, by means of an elbow lever construction. Three diagrams are given. In German.

PB L 45711. I.G. FARBENINDUSTRIE A.G. Sieve-bulge adjusting pliers. (Patent application I 74879 IX/87b) (Enlargement Print of Frames 4898-4900 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Special pliers are described for straightening out bulges caused by expansions in wire sieves such as used in paper and cellulose manufacture, and others using conveyers of this type. Double pliers, connected by a hinge, are shown in a drawing. In German.

PB L 45712. I.G. FARBENINDUSTRIE A.G. Preparation of colored photographic prints and transparencies with aid of derivatives of omega-cyano-acetophenon as color coupling component. (In addition to I 74691 IVa/57b) (Patent application I 74869 IVa/57b) (Enlargement Print of Frames 4901-4904 of FIAT Microfilm Reel 145, PB 19921) Price: Microfilm-$1.00 - Photostat-$1.00
In the main application a component for red was described of the general formula R-X-CO-CH_2-CN. R represented an aromatic group which may be substituted. This expansion claims that R may also represent a heterocyclic group which may be substituted in any way; or a mixed heterocyclic-aromatic group. X represents an aliphatic carbon chain with at least 2 C atoms. This carbon chain contains double and/or triple bonds; it may be substituted with aliphatic or aromatic radicals. Three examples and three formulas are given. In German.

PB L 45713. I.G. FARBENINDUSTRIE A.G. Preparation of polyamide compounds. (Patent application I 74891 IVc/39c) (Enlargement Print of Frames 4905-4908 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
In the preparation of many linear polyamides solvents are needed. It was found that cyanamides disubstituted by alkyl groups are particularly useful solvents or fluxes for this purpose. They are stable, do not tend to discover the product and are easily removable from it. Six examples are given. In German.

PB L 45714. I.G. FARBENINDUSTRIE A.G. Roll-film spool. (Patent application I 74899 IXa/57a) (Enlargement Print of Frames 4909-4914 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
The spool, according to this invention, carries in its flange a steerer of specific shape for each kind of film. This steerer sets in motion a device in the camera which indicates the kind of film used and its sensitivity. The steerer is a guiding curve, spiral or nut. Its working is explained in detail by means of three drawings. In German.

PB L 45715. I.G. FARBENINDUSTRIE A.G. Photographic or cinematographic cameras with coupled electric light meter and device for indicating kind of film inserted. (Patent application I 74898 IXa/57a) (Enlargement Print of Frames 4915-4919 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
This invention combines two previously described devices. One is an indicator which, through an arrangement of pegs different for each type of film, shows by the position of a disk which kind of film is being used. The other is an electric light meter which allows variation of its zero position, so as to correspond with the sensitivity of the particular type of film used. The combination changes the zero position automatically by mechanically coupling the light meter with the indicator. How this is accomplished is shown in a drawing and described in detail. The invention may be applied to motion picture cameras as well. In German.

PB L 45716. I.G. FARBENINDUSTRIE A.G. Preparation of direct positives with aid of Sabatier's effect using material according to application I 72776 IVa/57b. (Patent application I 74941 IVa/57b) (Enlargement Print of Frames 4920-4921 of FIAT Microfilm Reel 145, PB 19921) May 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
The previous application described a second exposure for the development of the positive. Here it is added that the reaction of certain reducing agents may be substituted for a second exposure. Best were hydrogen peroxide and hydrazine hydrate and the substitution products of hydrazine. They may be used in a preliminary bath or as an addition to the developing bath. The method may also be used for color development. In German.

PB L 45717. I.G. FARBENINDUSTRIE A.G. Device for closing and opening of supply and work containers, as well as conveyer devices. Expansion of application I 74470 XII/39a. (Patent application I 74926 XII/39a) (Enlargement Print of Frame 4922 of FIAT Microfilm Reel 145, PB 19921) May 1943. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
The main application described a plug for closing containers and conveyers when working with liquefiable plastics such as polyamides, by cooling on the spot where the plug is desired and by melting the plug for opening. Special devices were needed to prevent the plug from drifting when heated. Here it is claimed that the cooling and warming devices should be located on a bend of the container or conveyer to prevent drifting. In German.

PB L 45718. I.G. FARBENINDUSTRIE A.G. Preparation of photographic color pictures by color development of silver halide emulsions. (Patent application I 74974 IVa/57b) (Enlargement Print of Frames 4923-4927 of FIAT Microfilm Reel 145, PB 19921) May 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
The novel color formers devised for use in color photography are acid amides of substituted 1-phenol-2-carboxylic acids and 3-amino pyridine. Instead of the latter anilines may be used having acid groups in 2,3 or 4 position of the anilide radical, and no other amino, alkyl or acid groups. These color components are prepared by known methods. The dyes obtained are distinguished by a very steep drop of their absorption curve toward both sides, particularly in the direction of the short waves. A graph illustrates their behavior. A table giving the absorption maxima of 11 dyes is added. In German.

PB L 45719. I.G. FARBENINDUSTRIE A.G. Preparation of polyureas and polythioureas. (Patent application I 74948 IVc/39c) (Enlargement Print of Frames 4928-4933 of FIAT Microfilm Reel 145, PB 19921) May 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
High polymeric polyureas and polythioureas are conveniently obtained by reacting amino compounds carrying two H-containing basic N-atoms with diisocyanates and/or diisothiocyanates in the presence of alcohols. If diisocyanates are used, the temperature has to be adjusted to the characteristic reactivity of the diisocyanates with the alcohols. While the nature of the alcohol does not play any part in the case of mustard oils, the use of diisocyanates makes the presence of secondary or tertiary alcohols as solvents desirable. Seven examples are given. Ten aliphatic amines and three diamines are mentioned specifically for this reaction. In German.

PB L 45720. I.G. FARBENINDUSTRIE A.G. Maltese cross drive. (Patent application I 74927 IXa/57c) (Enlargement Print of Frames 4934-4938 of FIAT Microfilm Reel 145, PB 19921) May 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is the description of a maltese cross driving mechanism (controlled by a steering contact or the like), designed to guide a screen or filter band in film printing machines. In this particular device the one-pin-disc rotates continuously, while the maltese cross is shifted axially through the steering contacts, in such a manner that it interlocks with the pin. The design is explained in detail and illustrated by diagrams. In German.

PB L 45721. I.G. FARBENINDUSTRIE A.G. Roll-film protecting paper. (Patent application I 74949 IVa/57b) (Enlargement Print of Frames 4939-4941 of FIAT Microfilm Reel 145, PB 19921) May 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Inscriptions on paper used to protect roll films may be produced without causing relief-like elevations, if temperature indicating colors are used. The color may infiltrate the whole mass of the paper or be contained in a special superficial layer. Eight inorganic colors, of the complex salt type are mentioned. In German.

PB L 45722. I.G. FARBENINDUSTRIE A.G. Process for the preparation of films and fibers from mixed polymers of asymmetric dichlorethylene. (Patent application I 74964 IVc/29b) (Enlargement Print of Frames 4942-4945 of FIAT Microfilm Reel 145, PB 19921) May 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
This patent application pertains to the preparation of films or fibers from copolymers of asymmetric dichloroethylene, containing a minimum of 75 percent dichloroethylene and having a softening point above 120 degrees. This patent claims the use of solutions in tetrahydrofuran of such copolymers prepared with total exclusion of oxygen. The method described in patent application I 61831 IVa/29b proved very useful for the spinning of these solutions. In this way fibers with a tensile strength in excess of 2.5 gm. per denier may be obtained in one step. In German.

PB L 45723. I.G. FARBENINDUSTRIE A.G. Preparation of stable solutions of dichlorethylene polymers in absence of oxygen, with at least 75 percent as dichlorocthylene in tetra hydrofurane. (Patent application I 74965 IVc/29b) (Enlargement Print of Frames 4946-4948 of FIAT Microfilm Reel 145, PB 19921) May 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Since the solubility of dichlorocthylene polymers decreases from oxidation, the stability during storage and processing of the solutions specified in this document is greatly improved by an addition of small amounts of reducing agents or substances capable of preventing oxidation. The solutions considered in this patent are suitable for the production of lacquers, films and fibers in the same way as the corresponding solutions produced and stored with exclusion of oxygen. Two examples are added. In German.

PB L 45724. I.G. FARBENINDUSTRIE A.G. Process for photographic marking of positives. (Patent application I 74941 IXa/57a) (Enlargement Print of Frames 4949-4955 of FIAT Microfilm Reel 145, 19921) May 1943. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
This patent application describes a photographic projection procedure by which the positive (or negative) may be marked with an inscription during the enlargement of a picture. According to the invention the text copy placed in contact with the printing paper and the negative (or positive) are printed simultaneously. The text copy, having the same size as the printing paper, is subdivided, by a separation line into a larger transparent area and a narrow strip containing the inscription to be photographed. The negative (or positive) also contains a separation line, which separates an area designed to carry the photograph of the inscription. Before taking the picture the negative (or positive) and the text copy have to be adjusted by a special device so that the separation lines are in register. The arrangement and operation of the apparatus used are explained in the document and illustrated by attached diagrams. In German.

PB L 45725. DEUTSCHE CELLULOID-FABRIK A.G., EILENBURG, GERMANY. Process for obtaining adhesion of layers of water soluble film formers on layers of vinyl chloride polymers. (Patent application D 90711 IVc/39b) (Enlargement Print of Frames 4956-4959 of FIAT Microfilm Reel 145, PB 19921) May 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
A firm adhesion of layers of water soluble film forming agents on layers of vinyl chloride polymers may be obtained by the following procedure: the film forming agents are spread on the surface of the vinyl chloride polymer film simultaneously with or after the application of an aqueous emulsion of a vinyl or acrylic acid copolymer of which at least one component contains an ester or ether group. This method is used in the production of photographic films. It is particularly useful for the preparation of matted surface films which are needed for retouching. Four examples are added. In German.

PB L 45726. I.G. FARBENINDUSTRIE A.G. Process for finishing fibers, yarns, weaves, textiles and other flat surface material from cellulose hydrate. (Patent application I 75033 IVd/8k) (Enlargement Print of Frames 4960-4963 of FIAT Microfilm Reel 145, PB 19921) May 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The object of this invention is a process for improving fabrics specified in the document title. The swelling value of these fabrics had been reduced previously with formaldehyde in an acid bath. For this purpose the fabrics are kneaded and fulled in the presence of a neutral, acid or alkaline liquid. The further the swelling value of the cellulose hydrate is reduced, the more rapidly and completely the fulling effect will take place. It consists in a longitudinal contracting and a matting together of the loose fibers or those woven into fabrics. Two examples are added. In German.

PB L 45727. I.G. FARBENINDUSTRIE A.G. Process for the hardening of proteins. (Patent application I 72895 IVa/57b) (Enlargement Print of Frames 4964-4967 of FIAT Microfilm Reel 145, PB 19921) Aug 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
Colloid layers, particularly of proteins such as glue, gelatine, casein, etc., and photographic layers made of these substances may be hardened by treatment with water soluble compounds containing in their molecule two ethylene oxide or ethylene imine rings. Thereby the disadvantages of the conventional hardening agents such as insufficient effect, difficulty in analysis, etc., are avoided. Seven examples are given. In German.

PB L 45728. I.G. FARBENINDUSTRIE A.G. Automatic device for indicating film grade for photographic or

unimatographic apparatus. (Patent application I 74903 IXa/57a) (Enlargement Print of Frames 4968-4973 of FIAT Microfilm Reel 145, PB 19921) May 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
This indicator uses a bore hole of specific length for each type of film, which causes a specific position for the peg operating a scale which shows the type of film being used, its sensitivity, or both. Details are explained on four drawings. Variations of the same idea are described, including its application for motion picture cameras. In German.

PB L 45729. I.G. FARBENINDUSTRIE A.G. Indicator device for kind and sensitivity of films inserted in photographic apparatus. (Patent application I 74902 IXa/57a) (Enlargement Print of Frames 4974-4979 of FIAT Microfilm Reel 145, PB 19921) May 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
The principal new item in this invention is a spring used (1) for better transmission from the steering device to the indicator, (2) for automatic return of the indicator to zero position when the reel is taken out. This idea may be used in combination with various previously described arrangements for automatic indication. It is described in detail and shown in three drawings. In German.

PB L 45730. I.G. FARBENINDUSTRIE A.G. Process for preparing linear polymers. (Patent application I 75008 IVc/39c) (Enlargement Print of Frames 4980-4990 of FIAT Microfilm Reel 145, PB 19921) May 1943. 11 p. Price: Microfilm-$1.00 - Photostat-$1.00
Purpose of this invention is the preparation of linear polymers with urea- and/or thiourea groups in the chain from diisocyanates and/or di-mustard oils and amino-compounds with two H-containing basic N-atoms. At least in part such amino-compounds are reacted which have hydroxyl- and/or mercapto groups in the molecule. The temperature must be kept low enough that no reaction between acylating agents and hydroxyl- or mercapto-groups will occur. Tertiary alcohols should be used as solvents in the reaction with isocyanates. This is a long document mentioning a great number of starting materials and containing 4 examples. In German.

PB L 45731. I.G. FARBENINDUSTRIE A.G. Device for spectral changing of copying light for copying or enlarging color negatives. (Patent application I 74992 IXa/57a) (Enlargement Print of Frames 4991-5000 of FIAT Microfilm Reel 145, PB 19921) May 1943. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
New in this application is the shift in the spectrum of the copying light for only part of the picture. This may be desirable e.g. for changing the colors of the faces in the foreground without changing the colors of the landscape background. It is accomplished by means of a filter which changes only part of the copying light. The filter may be moved during the process in order to produce gradual changes. Where the desired change is limited to a small surface, a stencil may be used in connection with the filter. In the former case the filter will be applied closer to the light source, in the latter closer to the negative. A combination color-neutral filter may be used, and other variations are mentioned. It is suggested as another solution to project colored light from a different light source on the parts of the picture to be affected in addition to the white copying light. The detailed description of the invention and its use is illustrated with five drawings. In German.

PB L 45732. I.G. FARBENINDUSTRIE A.G. Process and device for spinning of melts. (Patent application I 75045 VII/29a) (Enlargement Print of Frames 5001-5005 of FIAT Microfilm Reel 145, PB 19921) May 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Standard methods encounter difficulties in the case of linear high polymers, which usually are obtained as powders. Non-melted particles penetrate into the nozzle and may cause clogging or defects. This application describes a device which, it is claimed, eliminates these difficulties. The powder passes through a screw conveyer in which it is heated under pressure while air is excluded. It enters the melting kettle in a softened state and then melts evenly. From this stage the process follows conventional methods. The detailed description is illustrated with two diagrams. In German.

PB L 45733. I.G. FARBENINDUSTRIE A.G. Light sensitive film with latent print on the margins. (Patent application I 75080 IVa/57b) (Enlargement Print of Frame 5006 of FIAT Microfilm Reel 145, PB 19921) May 1943. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00
Roll films, particularly those on flangeless reels, frequently show fogginess in the margins which may render illegible when developed, latent print markings produced by exposure This is avoided by adding to the emulsion, in the margin zone, a desensitizer. One example is added. In German.

PB L 45734. I.G. FARBENINDUSTRIE A.G. Process for preparing polycarbamic acid compounds. (Patent application I 75079 IVc/39c) (Enlargement Print of Frames 5007-5015 of FIAT Microfilm Reel 145, PB 19921) May 1943 9 p. Price: Microfilm-$1.00 - Photostat-$1.00
Polycarbamic acid compounds from amino-compounds with two H-containing basic N-atoms and bis chloro-formyl esters are obtained if only such bis chloro-formyl esters or amino compounds with two H-containing basic N-atoms are used which have laterally linked cyclic or open acetal or mercaptal groups. After hydrolysis of the acetal or mercaptal group the polycarbamic acid compounds are treated with substances reacting with hydroxyl or sulfhydryl compounds. This document contains numerous detailed formulas and two examples. In German.

PB L 45735. I.G. FARBENINDUSTRIE A.G. Device for the reversal of color negatives. Expansion of patent 715 240. (Patent application I 75173 IXb/75c) (Enlargement Print of Frames 5016-5026 of FIAT Microfilm Reel 145, PB 19921) May 1943. 11 p. Price: Microfilm-$1.00 Photostat-$1.00
The patent concerns an electrical method, using a cathode ray tube, for obtaining a positive image from a color negative for the purpose of checking the colors. This application adds an arrangement by which several positive images are obtained side by side. Their colors may then be modified in different ways and compared. The color modification may be accomplished electrically, by changing the intensity of one of the primary colors; or mechanically, by the use of filters in the primary colors having also a black or gray sector, allowing control by use of different proportions of color to grey. Construction and use are explained in detail by means of five drawings. In German.

PB L 45736. I.G. FARBENINDUSTRIE A.G. Process for preventing embrittlement of linear high polymers. (Patent application I 75101 IVc/39c) (Enlargement Print of Frames 5027-5031 of FIAT Microfilm Reel 145, PB 19921) May 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Addition of small amounts of carbazol or carbazol derivatives to linear high polymers with amide groups in the chain during or after their preparation or molding will protect them against harmful influences of heat or light. Five examples. In German.

PB L 45737. I.G. FARBENINDUSTRIE A.G. Process for preventing embrittlement of linear high polymers. (Patent application I 75102 IVc/39c) (Enlargement Print of Frames 5032-5037 of FIAT Microfilm Reel 145, PB 19921) May 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
Addition of small amounts of bromine or iodine salts before, during or after molding to linear high polymers with amide groups in the chain will protect them against harmful influences of heat, light and weather. Five examples are added. In German.

PB L 45738. I.G. FARBENINDUSTRIE A.G. Process for sensitising silver halide emulsions. (Patent application I 75161 IVa/57b) (Enlargement Print of Frames 5038-5040 of FIAT Microfilm Reel 145, PB 19921) May 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
It was found that certain anthraquinone derivatives may be used as sensitizers: those O-acyl derivatives of anthraquinones which have in their molecule at least two anthracene or phenanthrene ring systems connected by at least one C-C band. It is sufficient if one of the hydroxy groups is acylised. Eight examples are given. In German.

PB L 45739. DEUTSCHE CELLULOID-FABRIK, EILENBURG, GERMANY. Products made from linear polycondensates and polymerization products of the vinyl-, acrylic acid-, and isoolefin-group. (Patent application D 90878 XII/39a) (Enlargement Print of Frames 5041-5045 of FIAT Microfilm Reel 145, PB 19921) May 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Polycondensates, especially those of polyamides or polyurethanes, are stretched and joined with linear polymers of vinyl-acrylic acid and isoolefins in the heat or in the heat with application of pressure. Five examples are added. In German.

PB L 45740. I.G. FARBENINDUSTRIE A.G. Process for preparing α-cyano ketones which are substituted with an organic group in α-position. (Patent application I 75167 IVd/12o) (Enlargement Print of Frames 5046-5050 of FIAT Microfilm Reel 145, PB 19921) May 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
In the presence of alkali metal or a similarly reacting alkali metal-compound and, if necessary, an inert solvent cyanoacetonitrile is reacted with such α,β-unsaturated carboxylic acid esters which have no aliphatic double bond in connection with an aromatic group near the carboxyl group. Nine examples are added. In German.

PB L 45741. I.G. FARBENINDUSTRIE A.G. Preparation of osmotic membranes for dialytic purification of alkali lyes. (Patent application I 75182 IVb/121) (Enlargement Print of Frames 5051-5056 of FIAT Microfilm Reel 145, PB 19921) May 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
The shortage of cotton conventionally used for this purpose made it desirable to find a substitute. It was found, that cellulose fiber tissues or felts could be made lye resistant by impregnation with insoluble metal hydroxides. Three examples are added. In German.

PB L 45742. I.G. FARBENINDUSTRIE A.G. Process for the preparation of linear polycondensation products. (Patent application P 77507 IVc/39c) (Enlargement Print of Frames 5057-5059 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Urea or an aliphatic diurea is reacted with equimolecular amounts of an aliphatic diprimary diamine with at least three atoms between the amino groups at temperatures of at least 160°C until generation of ammonia stops. Five examples are added. In German.

PB L 45743. I.G. FARBENINDUSTRIE A.G. Preparation of aliphatic diureas. (Patent application I 75211 IVc/12o) (Enlargement Print of Frames 5060-5062 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Valuable aliphatic diureas could be obtained by the reactions of aliphatic diprimary diamines, particularly polymethylene diamines, with urea at a temperature between 120 and 160° C. The yield is very good. Four examples are given. In German.

PB L 45744. DEUTSCHE CELLULOID-FABRIK, EILENBURG, GERMANY. Process for improving characteristics of variously shaped linear polycondensates. (Patent application D 90967 IVc/39b) (Enlargement Print of Frames 5063-5065 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The products, which may be shaped like films, plates, bands, pipes or bars are heated while stretched and immediately chilled to at least 0° with continued stretching. This tempering process "freezes" the linear molecules in the forced position. This method can be modified by first saturating the material with a hydroxyl containing liquid, such as water, alcohol or a mixture and subsequent freezing. Two examples are added. In German.

PB L 45745. I.G.FARBENINDUSTRIE A.G. Preparation of linear polyurea compounds. (Patent application I 75259 IVc/39c) (Enlargement Print of Frames 5066-5073 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
Polyurea compounds were obtained by reacting diisocyanates or diisothiocyanates with amino compounds having two hydrogen containing basic nitrogen atoms. The temperature must be kept low enough to prevent the isocyanates from decomposing. The reaction takes place either in solution or dispersion in presence of water or organic solvents or a mixture of both. Nine examples are added. In German.

PB L 45746. I.G. FARBENINDUSTRIE A.G. Process for increasing stability of oxidizable photographic treatment baths. (Patent application I 75258 IVa/57b) (Enlargement Print of Frames 5074-5076 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The stability of oxidizable photographic developers is increased by addition of hydroxylamine hydrochloride with aliphatic nitrogen containing polycarboxylic acids or their water soluble salts. Three examples with formulas are added. In German.

PB L 45747. I.G. FARBENINDUSTRIE A.G. Preparation of solutions and pastes from synthetic linear high polymers. (Patent application I 75260 IVc/29b) (Enlargement Print of Frames 5077-5079 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Organic sulfur containing amino- or hydroxy-compounds are used as solvents or plasticisers for solutions and pastes from linear high polymers with amido groups in the side chain, such as polyamides or polyurethanes. The solvents may be mixed if necessary with other solvents some of the specific solvents mentioned are: Thioethers like dihydroxydiethyl sulfide, or thioureas and in derivatives like aminothiazoles. Three examples are given. In German.

PB L 45749. I.G. FARBENINDUSTRIE A.G. Device for drying synthetic products, especially spinning fibers. (Patent application I 75337 V/82a) (Enlargement Print of Frames 5080-5083 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The object of this patent is a drying cabinet containing a built-in shaking trough. The botton of this trough may consist of a grate which may serve as a conveyer for the spinning fibers to be dried. Two drawings are added. In German.

PB L 45750. I.G. FARBENINDUSTRIE A.G. Preparation of dialysis membranes for alkaline liquids. (Patent application I 75362 IVb/12d) (Enlargement Print of Frames 5084-5086 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This document concerns an additional application to the main patent I 66961 IVb/12d. It is claimed that materials used as dialysis membranes should contain threads or fibers from cellulose treated to be alkaline resistant in addition to fibers from high polymer hydrocarbons, their chlorinated derivatives or copolymers. In German.

PB L 45751. I.G. FARBENINDUSTRIE A.G. Process for stiffening of wires and bristles made of synthetic linear higher polymers. (Patent application I 75377 IVc/39b) (Enlargement Print of Frames 5087-5089 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
The objects are stretched, consolidated in their form and treated with alkali. Subsequently they are exposed to a temperature above 120 degrees for at least half an hour. This temperature should be about 50 degrees below the softening point of the polymer. This kind of heat treatment proved particularly useful in bristles exposed to moisture during use, as are required for tooth, nail and bottle brushes. In German.

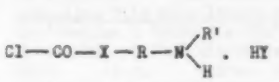
PB L 45752. I.G. FARBENINDUSTRIE A.G. Preparation of mono and polychromatic photographs and transparencies with aid of chromogenic development. (Patent application I 75379 IVa/57b) (Enlargement Print of Frames 5090-5096 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00
The color formers, resulting from the interaction of amino isophthalic esters and their substitution products with aceto nitrile (in the presence of alkali), proved to be valuable color forming agents with the following characteristics: Their corresponding purple dyes show absorption limits with a steep uniform drop and an absorption maximum of at least 520 mμ varying according to the substituent. These novel color formers are easily produced and excellently soluble in dilute alkalies. They are made diffusion resistant by the incorporation of suitable organic molecular radicals. Six examples are added. In German.

PB L 45753. I.G. FARBENINDUSTRIE A.G. Packingless valve. (Patent application I 75380 XII/47g) (Enlargement Print of Frames 5097-5100 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The object of this invention is a packingless cone valve. It allows highly viscous masses to pass freely, and does not contain any dead corners. Upon shutting, any residues collecting are forced either into the feed pipe or the outlet pipe. The cone, being moved only in the direction of its longitudinal axis, does not perform any rotary motions. When open the valve gives a perfect direct shut-off of such a kind that in the case of a vacuum no air can enter from outside. Diagrams explain the design and operation of the valve. In German.

PB L 45754. I.G. FARBENINDUSTRIE A.G. Process for rending paper, especially photographic paper copies, transparent. (Patent application I 75391 IVc/55f) (Enlargement Print of Frames 5101-5103 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
After rendering photographic paper copies transparent with fatty oil, the removal of excess oil is often difficult. This patent application tries to solve the problem in the following way: The paper, after being treated with oil, goes through a treatment with wetting agents and is then rinsed in water. Instead, the procedure may be carried out in one step with a combined solution of oil and wetting agent. In German.

PB L 45748. I.G. FARBENINDUSTRIE A.G. Preparation of hydrochlorides of aminoalkylesters of chloroformic acid. (Patent application I 75413 IVc/12qu) (Enlargement Print of Frames 5104-5108 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
At a low temperature hydrochlorides (or sulfonic salts) of amino alkylesters or aminomercaptans are reacted with an excess of phosgene or substances reacting like phosgene. This reaction takes place perferably in presence of solvents which do not affect the reaction. Six detailed examples are added. In German.

PB L 45755. I.G. FARBENINDUSTRIE A.G. Preparation of linear polyurethanes. (Patent application I 75414 IVc/39c) (Enlargement Print of Frames 5109-5113 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Hydrochlorides (or sulfonic salts) of aminoalkylesters of chloroformic acid either in liquid state or dissolved in organic solvents are used to produce linear polyurethanes. The starting substances should have the following structure:



R stands for a bivalent hydrocarbon radical, R' for hydrogen, alkyl or alkyl substituted by an indifferent radical, Y represents the anion of a strong acid. These starting substances are poured, if necessary drop by drop with vigorous stirring, into an aqueous solution of a compound that will combine with acids (e.g. potassium carbonate). The resulting polyurethans present suitable products for spinning. Three examples are added. In German.

PB L 45756. I.G. FARBENINDUSTRIE A.G. Process for preliminary treatment of protective paper for light sensitive photographic material. (Patent application I 75415 IVa/57b) (Enlargement Print of Frames 5114-5115 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
Before application of the conventional waxy protective layer the paper protecting light sensitive material is treated with a solution of a weak base, e.g. a solution of borax in methanol. In German.

PB L 45757. DEUTSCHE CELLULOID-FABRIK, EILENBURG, GERMANY. Process for applying layers of chlorine containing polymers on surfaces of linear polycondensates. (Patent application D 91142 IVc/39b) (Enlargement Print of Frames 5116-5119 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 4 p. Price: Microfilm-$1.00 Photostat-$1.00
Two or more copolymers of vinyl chloride, vinylidene chloride or styrene with monomers containing at least one ester and/or one ether group are used to produce bonding agents for applying protective or plasticizing layers on surfaces of linear polycondensates. These monomers should be able to copolymerize. Three examples are given for coating conveyer belts and similar objects. In German.

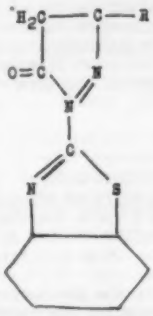
PB L 45758. I.G. FARBENINDUSTRIE A.G. Preparation of fixing baths for color pictures after previous chromogenic development. (Patent application I 75436 IVa/57b) (Enlargement Print of Frames 5120-5122 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Small amounts of water soluble aliphatic or aromatic seleninic or tellurinic acid or their salts are added to the fixing baths. The p^H value of these baths should be kept between five and seven. This is effected by adding suitable buffer salts, e.g. sodium acetate. Three examples containing detailed formulas are added. In German.

PB L 45759. I.G. FARBENINDUSTRIE A.G. Production of colored stereo pictures. (Patent application I 75437 IVa/57b) (Enlargement Print of Frames 5123-5127 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
By means of a stereo-optic two stereo pictures are made, the colors of which are complementary. The pictures are made with stereoscopic parallaxis. For the exposure of the two stereo-part-pictures a photographic material is used having two silver halogenide emulsion layers, one of which is arranged above the other. The two layers may either be separated by a filter layer or the upper layer may contain a protecting dye. The two silver halogenide emulsion layers contain dye components not affecting the

gelatine and they should not be able to diffuse from one layer into the other. The part-color-pictures are developed by color development or according to the anti-diazotate process. A negative which is color complementary to the original is made and is printed onto the same material by which a positive of correct colors is obtained. In German.

PB L 45760. I.G. FARBENINDUSTRIE A.G. Preparation of colored prints and transparencies by subtractive color process by means of chromogenic development. (Patent application I 74690 IVa/57b) (Enlargement Print of Frames 5128-5133 of FIAT Microfilm Reel 145, PB 19921) Mar 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

For the development of the purple picture a diffusion proof component is used in the emulsion having the following general formula:



Where R represents an organic substituent capable of lessening the diffusion of pyrazolon in colloids, and X represents an acid group. In German.

PB L 45761. I.G. FARBENINDUSTRIE A.G. Process for stretching textile fiber bands. (Patent application I 74850 VII/76c) (Enlargement Print of Frames 5134-5136 of FIAT Microfilm Reel 145, PB 19921) Apr 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

By passing these bands through cylinder aggregates the cylinders of which are superimposed in order to achieve a meander-like passage. Four drawings are attached. In German.

PB L 45762. I.G. FARBENINDUSTRIE A.G. Preparation of multilayer color films by applying one or several additional light sensitive layers for production of masks. (Patent application I 75248 IVa/57b) (Enlargement Print of Frames 5137-5141 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

Multilayer color films are produced by applying one or several additional light sensitive layers in order to obtain masks. It is claimed in this patent, that either the normal layers of the picture or the layers of the mask may consist of direct positive emulsions. Two detailed examples are added. In German.

PB L 45763. I.G. FARBENINDUSTRIE A.G. Marking film grade. (Patent application I 75443 IXa/57a) (Enlargement Print of Frames 5142-5149 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00

An automatic device for showing the type of a film inserted into a camera is arranged in such a manner that the indicating device is operated by means of notches in the film. One or more feelers or pegs are provided in the camera. These feelers by making contact with the heads of the films and the fibers proper direct the indicating device by means of markings which are provided at specific positions of the film. Seven drawings are attached. In German.

PB L 45764. I.G. FARBENINDUSTRIE A.G. Film cameras. (Patent application I 75444 IXa/57a) (Enlargement Print of Frames 5150-5153 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 4 p. Price: Microfilm-$1.00 - Enlargement-$1.00

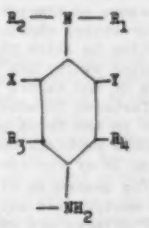
A film camera is described carrying a device which indicates the type of the inserted film. The film moving device is blocked if the indicating device is not engaged. Three drawings are attached. In German.

PB L 45765. I.G. FARBENINDUSTRIE A.G. Process for the production of anaglyphic pictures. (Patent application I 75491 IVc/57b) (Enlargement Print of Frames 5154-5156 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

Stereoscopic pictures may be transformed into anaglyphic pictures in the following manner: The stereoscopic black-white pictures are printed on a subtractive multilayer color material, after an anaglyphic negative has been prepared from the two pictures by known methods. The printing is done in such a way that the two pictures of the anaglyphic negatives are recorded (in different colors) in different layers of the printing material. The two layers of the anaglyphic negatives contain dyes the absorption maxima of which differ from each other as widely as possible, the absorption maximum of one dye coinciding with the absorption minimum of the other. The dyes used in this particular process are blue-green and yellow. In German.

PB L 45766. I.G. FARBENINDUSTRIE A.G. Preparation of color pictures according to color development process. (Patent application I 75492 IVa/57b) (Enlargement Print of Frames 5157-5161 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 5 p. Price: Microfilm-$1.00 Photostat-$1.00

In the color development process a wide variation of color shades is obtained, if developers of the following constitution are used



In this formula R_1 and R_2 are aliphatic or aliphatic aromatic radicals, X and Y represent H, OCH_3 or alkyl, and R_3 and R_4 stand for positive substituents, e. g. alkyl groups, which may be substituted by hydroxy or amino groups. Four detailed examples are added. Four graphs illustrate the behavior of color absorption. In German.

PB L 45767. I.G. FARBENINDUSTRIE A.G. Portable projection apparatus. (Patent application I 75527 IXa/57a) (Enlargement Print of Frames 5162-5164 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

This is an addition to a patent (application I 71062 IXa/57a) (PB 45491), in which a portable projection apparatus provided with a system of movable screens was described. In the design presented in this additional document two projection screens are so hinged on the cover of the case that one screen is freely movable when swung into position for using. When swinging beyond this position it carries the other screen from its rest position, placing it into using position. The diagram mentioned in the text is missing. In German.

PB L 45768. I.G. FARBENINDUSTRIE A.G. Lighting system for devices for copying or enlarging appliances for color negatives. (Patent application I 75528 IXa/57a) (Enlargement Print of Frames 5165-5169 of FIAT Microfilm Reel

145, PB 19921) Jul 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Unlike the conventional illumination systems this system is so arranged that the illuminating surface of the light source, after the light has been passed through a powerful condenser, is projected (on a scale of 1 : 2 at most) on a plane where an intermediate converging lens is installed. Close to this lens color filters are set up for the correction of color adulterations. A light-diffusing screen is installed immediately in from of the color negative. In addition, a device for subduing the light of axis-near rays is inserted into the path of the illuminating system. A diagram illustrating the appliance is attached. In German.

PB L 45769. I.G. FARBENINDUSTRIE A.G. Preparation of linear polyamides. (Patent application I 75545 IVc/39c) (Enlargement Print of Frames 5170-5173 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The object of this invention is a procedure for obtaining polyamides of pimelic acid, in which the latter before condensation is converted into a stable salt. Pimelic acid readily soluble in water can be distinguished from other dicarboxylic acids by its reaction with tetra methylene diamine forming a uniform, difficultly soluble acid salt, more exactly specified in the document. This salt is condensed in the heat with a diamine forming polyamides. At least an equivalent amount of the diamine is used. The linear polyamides thus obtained are suitable spinning material producing threads fast-to-boiling. They may be manufactured into stockings and underwear. Wool, cellulose wool and the like may be used as additional materials. In German.

PB L 45770. I.G. FARBENINDUSTRIE A.G. Miniature camera with gyratory shutter. (Patent application I 75587 IXa/57a) (Enlargement Print of Frames 5174-5181 of FIAT Microfilm Reel 145, PB 19921) 1943. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00
This type of small film camera is characterized essentially by the fact that the sector-shaped shutter plates move transversely to the direction in which the film travels. The pivot pins of the shutter plates are arranged parallel with the longitudinal edge of the camera front. The shutter cocking lever is fastened immediately to a pivot pin, passes through a slot in the front part of the camera housing and swings in a plane vertical to the camera front. Shutter release and cocking lever are arranged on opposite sides of the lens unit. The mechanism of the camera allows the shutter release to be manipulated only when the shutter lever is cocked. Other advantages are smallness and convenience of operation of the camera. The design is illustrated by diagrams. In German.

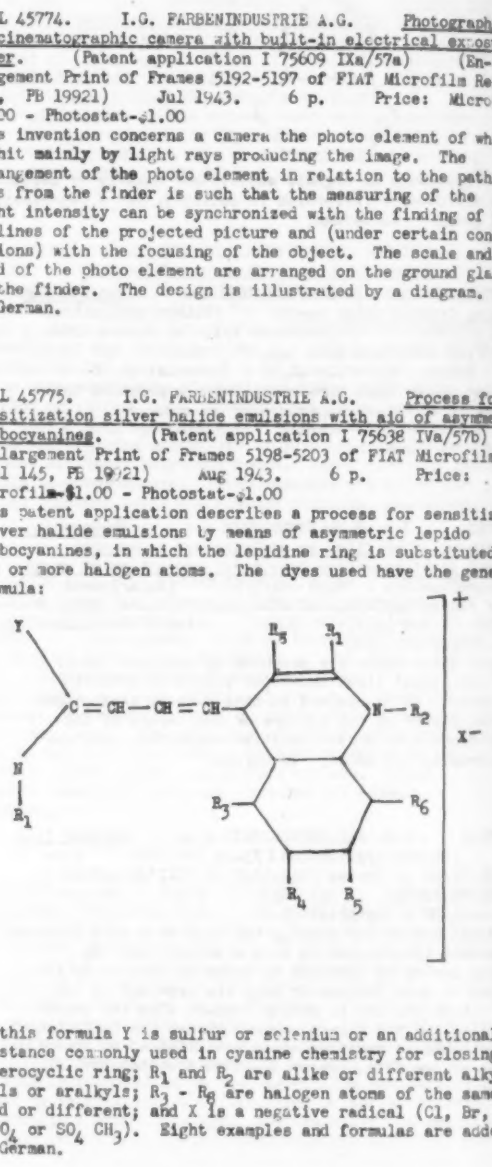
PB L 45771. I.G. FARBENINDUSTRIE A.G. Process for increasing viscosity of aqueous solutions of gelatin. (Patent application I 75600 IVc/39b) (Enlargement Print of Frames 5182-5184 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is an addition of patent application I 64771, which suggested the use of azyl amino compounds of aromatic sulfonic acids of a specified chemical composition, designed to increase the viscosity of aqueous gelatin solutions. In developing this method it proved effective to use compounds which are indirectly linked by means of at least 10 C atoms to aromatic sulfonic or carboxylic acids. In German.

PB L 45772. I.G. FARBENINDUSTRIE A.G. Process for increasing viscosity of aqueous solutions of gelatin. (Patent application I 75601 IVc/39b) (Enlargement Print of Frames 5185-5186 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00
This is an addition to patent application I 64771 IVc/39, which described a process for increasing the viscosity of aqueous gelatin solutions by using azyl amino compounds of aromatic sulfonic acids (specified in the document). This additional patent application suggests the addition to the gelatin solutions of heterocyclic sulfonic or carboxylic acids in which aliphatic groups of at least 10 C atoms are linked (directly or indirectly) to the sulfonic or carboxylic acid. In German.

PB L 45773. I.G. FARBENINDUSTRIE A.G. Preparation of linear polycarbamic acid compounds. (Patent application I 75608 IVc/39c) (Enlargement Print of Frames 5187-5191 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The preparation of the compounds specified in the title is accomplished by the interaction of diisocyanates or diisothiocyanates with diols, diamines or aminoalcohols. The ingredients are mixed at a slightly elevated temperature to cause almost complete solution. The resulting liquid is lead to a screw conveyer in which the material, while complete melting is avoided, is kept until the desired degree of polymerization is attained. Following this the material is either directly melted and formed or conveyed to a melting grate. By this procedure sudden rises of temperature are avoided and the polyurethanes thus obtained are uniform. Disintegration and cross linking does not occur. A flow sheet and diagram of the apparatus are attached. In German.

PB L 45774. I.G. FARBENINDUSTRIE A.G. Photographic or cinematographic camera with built-in electrical exposure meter. (Patent application I 75609 IXa/57a) (Enlargement Print of Frames 5192-5197 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
This invention concerns a camera the photo element of which is hit mainly by light rays producing the image. The arrangement of the photo element in relation to the path of rays from the finder is such that the measuring of the light intensity can be synchronized with the finding of the outlines of the projected picture and (under certain conditions) with the focusing of the object. The scale and hand of the photo element are arranged on the ground glass of the finder. The design is illustrated by a diagram. In German.

PB L 45775. I.G. FARBENINDUSTRIE A.G. Process for sensitization silver halide emulsions with aid of asymmetric carbocyanines. (Patent application I 75638 IVa/57b) (Enlargement Print of Frames 5198-5203 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
This patent application describes a process for sensitising silver halide emulsions by means of asymmetric lepido carbocyanines, in which the lepidine ring is substituted by one or more halogen atoms. The dyes used have the general formula:



In this formula Y is sulfur or selenium or an additional substance commonly used in cyanine chemistry for closing a heterocyclic ring; R_1 and R_2 are alike or different alkyls, aryls or aralkyls; R_3 - R_6 are halogen atoms of the same kind or different; and X is a negative radical (Cl, Br, Cl O_4 or SO_4 CH_3). Eight examples and formulas are added. In German.

PB L 45776. I.G. FARBENINDUSTRIE A.G. Preparation of photographic color pictures according to the subtractive three-color process with aid of chromogenic development. (Patent application I 75673 IVa/57b) (Enlargement Print of Frames 5204-5209 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

For the preparation of the color forming agents used in the above process isophthalic esters are reacted with acetonitrile in the presence of alkali. Excluded are such isophthalic esters which carry an amino group and are not substituted otherwise. The color forming agents are either incorporated into the silver halide emulsions during the preparation process or are added to the chromogenic developing solution. The exact mode of preparation of color formers is illustrated by seven examples. In German.

PB L 45777. I.G. FARBENINDUSTRIE A.G. Process for color-true copying of multicolor objects according to the subtractive process for production of multicolor pictures. (Patent application I 75696 IVa/57b) (Enlargement Print of Frames 5210-5215 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

In the procedure of the subject heading insufficient absorption of dyes in color separation negatives causes color defects in the printing process. According to this patent application these shortcomings may easily be avoided, considering the following facts: In the zone of the spectrum which is involved by the "faulty" absorption of a dye relatively less light is transmitted than in a zone of the spectrum in which there is no "faulty" absorption. Hence this faulty absorption shifts the mutual relation of the spectral components. If the interrelation of the two color components of a mixture is changed, then the resulting color will change. Consequently, the relation which would exist between the spectral zones if it were not changed by any faulty absorption must not be disturbed in behalf of a true recording of color. Since, however, shiftings are unavoidable due to the imperfection of dyes, it is necessary to restore the original relation as properly as possible. For this purpose the present invention suggests to weaken the excess spectral zones encroaching upon the other seperation image zone by an additional absorption brought into their path of rays; this weakening process is to be carried to a point where the original relation is restored. In other words, the relation of the transmitted spectral zones is changed in such a way that the undesired absorptions of the dye are compensated. A table with diagrams illustrating the degree of sensitivity of light sensitive emulsions for the colors of the spectrum is attached. In German.

PB L 45778. I.G. FARBENINDUSTRIE A.G. Process for spinning of fully synthetic fibers. (Patent application I 75724 VII/76b) (Enlargement Print of Frame 5216 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 1 p. Price: Microfilm-$1.00 - Photostat-$1.00

This patent application suggests the use of pressure cylinders coated with layers of synthetic linear higher polymers, for the processing of fully synthetic fibers in worsted and cotton spinning mills. In German.

PB L 45779. I.G. FARBENINDUSTRIE A.G. Device for measuring and regulating pressure of synthetic melts flowing in pipes at high temperatures. (Patent application I 75741 IXb/42gu) (Enlargement Print of Frames 5217-5220 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

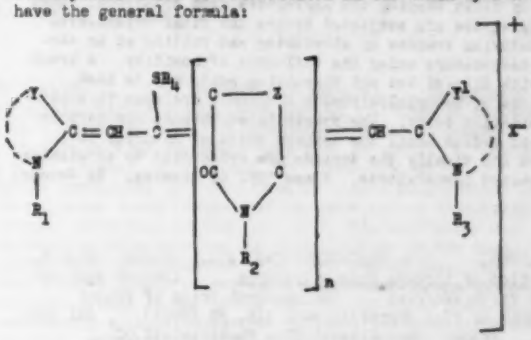
The principle of this invention is the arrangement of the manometer or pressure regulator outside the high temperature range and the use of a gas instead of a liquid as pressure transmitting agent. The device is characterized by the following feature: A connecting pipe is attached to the main pipe. The fused mass extends into a part of the connecting pipe. This connecting pipe communicates with a pressure measuring or pressure regulating device, and in addition to this with a boiler exposed to excess pressure. Between the connecting pipe and the boiler a pressure regulating valve is inserted. A diagram is included. In German.

PB L 45780. I.G. FARBENINDUSTRIE A.G. Process for removing bark,especially from beechwood. (Patent application I 75765 VII/55a) (Enlargement Print of Frames 5221-5222 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

The logs while being moved longitudinally are beaten in oblique direction with a tool fitted with a blunt edge in a right angle. The blows are performed by means of a machine constructed accordingly. The best results are achieved when the round edged tool that executes the blows continues immediately after the blow, to scrape along the surface of the log in the direction of its movement. In German.

PB L 45781. I.G. FARBENINDUSTRIE A.G. Process for sensitisation of silver halide emulsions. (Patent application I 75793 IVa/57b) (Enlargement Print of Frames 5223-5232 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00

Silver halide emulsions are sensitized by the use of rhodocyanins which are substituted in the chain by S-R and have the general formula:



where Y = sulfur, selenium or $C(CH_3)_2$ and the non metallic atoms for the formation of hetero-cyclus used in cyanin chemistry; Y^1 = oxygen, sulfur, selenium, $C-(CH_3)_2-CH=$ CH-, and the non metallic atoms for the formation of a heterocyclus used in cyanin chemistry; Z = oxygen, sulfur selenium, $N-R_4$; n = 1 or 2; R_1-R_4 = identical or different alkyl, aryl or arakyl proofs; X = a negative radical, i.e. Cl, Br, Iodine, ClO_4, SO_4CH_3, $SO_4C_2H_5$.

Fifteen detailed examples and formulas are attached. In German.

PB L 45782. DEUTSCHE CELLULOID-FABRIK A.G. EILENBURG, GERMANY. Preparation of solutions or pastes from nitrocellulose. (Patent application D 91496 IVc/22h) (Enlargement Print of Frames 5233-5238 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

Nitrocellulose of any nitration grade is dissolved in hydrocarbons or chlorinated hydrocarbons which contain 10 to 30 percent of dissolved disubstituted cyanamide. The alkyl-, and/or aryl-, and/or hydroaryl- substitution radicals of the cyanamide may be identical or different from each other, or may be combined by means of a heteroatom forming cyclus. In German.

PB L 45783. DEUTSCHE CELLULOID-FABRIK A.G., EILENBURG, GERMANY. Distillation apparatus. (Patent application D 91537 IVa/12a) (Enlargement Print of Frames 5239-5242 of FIAT Microfilm Reel 145, PB 19921) Aug 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

An apparatus for distillation of liquids containing dissolved crystalline and/or colloidal substances is shown. A drawing is attached. The apparatus is devised for alcohol -water mixtures, and contains a bottom column with inserted packed layers, built in directly under the feeding pipe. In German.

PB L 45784. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Preparation of clothing textiles from polyamides. (Patent application I 75328 IVc/29b) (Enlargement Print of Frames 5243-5251 of FIAT Microfilm Reel 145, PB 19921) Jun 1943. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

Copolymers are produced by condensation of ε-coprolactam with the adipic salt of tetramethylendiamine. Instead of the adipic salt a methylated adipic salt and instead of tetramethylendiamine either penta- or hexmethylendiamine may be used to produce the copolymer. In some cases the presence of formic acid or formic acid salts is required. By varying the starting substances in the above mentioned way textile fibers of varying properties were obtained. Three examples are added. Four graphs concerning the resistance towards boring are attached. In German.

PB L 45785. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Preparation of fibers and surface structures. (Patent application I 75575 IVc/29b) (Enlargement Print of Frames 5252-5260 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00

Threads and films of methylolpolyamide compounds are produced by first shaping the aggregates from solutions. Then the aggregates are subjected before the final orientation to a maturing process by stretching and rolling at an elevated temperature under the influence of humidity. A treatment with diluted but not dissolving acids may be used. Solutions of methylolpolyamide compounds are spun in acid precipitation baths. The precipitated threads are left in the acid medium until the desired point of maturity is reached and finally the threads are orientated by stretching at elevated temperatures. Frame 5252 is missing. In German.

PB L 45786. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Production of threads from polyamides. (Patent application I 75576 IVc/29b) (Enlargement Print of Frames 5261-5269 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 9 p. Price: Microfilm-$1.00 - Photostat-$1.00

Methylol compounds of high polymer linear polyamides are spun in volatile solvents according to the dry spinning process and the stretched and twisted threads are heated under tension to the hardening temperature. Methylol compounds are used which are derived from polyamides soluble or insufficiently soluble in alcohol. Three examples are added. In German.

PB L 45787. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Process for finishing shaped structures from polyamides. (Patent application I 75577 IVc/39b) (Enlargement Print of Frames 5270-5272 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

Shaped structures from alcohol soluble methylol compounds of linear polyamides are treated with diluted but non dissolving acids or with water vapor in the presence of acids without subsequent orientation. One example is added. In German.

PB L 45788. I.G. FARBENINDUSTRIE A.G. Process for chemical modification of polyamide compounds reacted with formaldehyde. (Patent application I 75578 IVc/22b) (Enlargement Print of Frames 5273-5283 of FIAT Microfilm Reel 145, PB 19921) Jul 1943. 11 p. Price: Microfilm-$1.00 - Photostat-$1.00

Polyamide compounds produced from reactions with formaldehyde are subjected to the action of alkali solutions or to the vapors of those solutions until chemical modification has occurred which changes their solubility. Especially those polyamides are treated in the mentioned way, which were originally insoluble or insufficiently soluble in alcohol. The treatment with alkali may take place in presence of cation active substances before or after the shaping of the polyamides. Twelve examples and one chart are added. In German.

PB L 45789. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Adhesive process. (Patent application I 75813 IVd/22l) (Enlargement Print of Frames 5284-5295 of FIAT Microfilm Reel 145, PB 19921) Sep 1943. 12 p. Price: Microfilm-$1.00 - Photostat-$1.00

Soluble methylol compounds of linear polyamides especially those of copolyamides or mixtures thereof or mixtures with other soluble polyamides are used as adhesives. The bonding may be combined with a heat treatment. The area to which the adhesive is applied may contain humidity before it is treated with heat. The hardening process may be achieved by the presence of alkaline substances. The methylol polyamide compounds may be applied as a film or foil for adhesive purposes. The film may contain carrier materials. 18 examples are given. In German.

PB L 45790. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Webbed braid. (Patent application I 75830 VII/86g) (Enlargement Print of Frames 5296-5297 of FIAT Microfilm Reel 145, PB 19921) Sep 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

A webbed braid consisting of a yarn of polyamide- or of polyurethan filament is made glossy by surface treatment with solvents or swelling agents under additon to high-polymer substances. Four examples are added. In German.

PB L 45791. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Support for sound-films in motion picture projectors. (Patent application I 75842 IXa/42g) (Enlargement Print of Frames 5298-5302 of FIAT Microfilm Reel 145, PB 19921) Sep 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

These optics are assembled in a tube and mounted in the projector by means of a single screw, for simple adjustment and removal, to permit cleaning. Drawings are included. In German.

PB L 45792. DEUTSCHE CELLULOID-FABRIK A.G., EILENBURG, GERMANY. Preparation of thin films from polyamides. (Patent application D 91613 IVc/39b) (Enlargement Print of Frames 5303-5305 of FIAT Microfilm Reel 145, PB 19921) Sep 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

This is an addition to the main patent (application D 81720 IVc/39b of Dec 15, 1939), in which a process for the preparation of sheets, tubes, rods, etc., from polyamides was described. The present document outlines a process for making thinner sheets than could be produced by the process described in the main patent. Very thin sheets, thinner than 0.09 mm (to 0.05-0.02 mm) can be produced, when the heated and molten polyamides containing the swelling agents are drawn out by passing over cold cylinders. These sheets, which have a high softening point are used in the manufacture of wrapping material and wicker-work. One example. In German.

PB L 45793. DEUTSCHE CELLULOID-FABRIK A.G., EILENBURG, GERMANY. Process for obtaining adhesion of layers of water soluble film forming agents on layers of cellulose trifatty esters. (Patent application D 91735 IVa/39b) (Enlargement Print of Frames 5306-5308 of FIAT Microfilm Reel 145, PB 19921) Sep 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

Most of the conventional methods of gluing photographic layers on cellulose triacetate bases are based on the use

PB L 45797. I. G. FARBENINDUSTRIE A. G. Process for determination of the color density curve of individual color component layers in a subtractive multilayer film, by elimination of subjective judgement of color transparency by the eye. (Patent application I 75979 IXa/57c) (Enlargement print of Frames 5320-5323 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

For an objective determination of correct printing conditions a colored sensitometer record on the negative film (to be

examined/ is measured by means of a photocell. For this purpose light of such wave lengths is used to which the individual color component layer (to be measured) of the positive material (to be used for printing) is spectrally sensitive. The light source serving for measuring the sensitometer record is decomposed spectrally. In front of the spectrum a mask is placed which transmits only the light of those spectral ranges to which the positive material is sensitive. In German.

PB L 45798. I. G. FARBENINDUSTRIE A. G. Process for the sole reproduction or emphasis of the black parts of a color pattern, especially for reproduction of multicolored graphic patterns. (Patent application I 76000 IVa/57d) (Enlargement Print of Frames 5324-5325 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

The colored copy containing the black-white pattern is photographed with infrared rays while cutting out all visible rays. For this purpose a black filter which absorbs all visible rays is placed in front of the lens unit of the camera. As photographic material a film sensitized to infrared is used. In German.

PB L 45799. I.G. FARBENINDUSTRIE A.G. Watering devices, especially for photographic plates, films and sheets. (Patent application I 76032 IXa/57c) (Enlargement Print of Frames 5326-5327 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

The watering device described in this patent application consists of a feed pipe, a reservoir, a distributing pipe, and a dam-like device. These parts are so arranged that the rinsing water is uniformly distributed and, in an even flow, rinses the film (or plate) placed in a slanting position. The drawing referred to in the text is missing. In German.

PB L 45800. I.G. FARBENINDUSTRIE A.G. Preparation of synthetic spinning fibers from tangled wastes of synthetic thread production. (Patent application I 76043 VII/76b) (Enlargement Print of Frames 5328-5329 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

The tangled waste threads are cut by known methods, carded for the parallel arrangement of the individual fibers, and if necessary stretched and curled. Subsequently, the card fleece is re-cut in order to remove the remaining excessively long fibers. Thus high quality artificial spinning fibers, workable into neat yarn, are obtained. In German.

PB L 45801. I.G. FARBENINDUSTRIE A.G. Process for sensitization of silver halide emulsions. (Patent application I 76060 IVa/57b) (Enlargement Print of Frames 5330-5336 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 7 p. Price: Microfilm-$1.00 - Photostat-$1.00

The dyestuffs used in the subject matter have the following general constitution:

of organic solvents. Hereby the texture of the film in certain surface areas is necessarily changed in relation to the surface. This patent application describes a procedure by which satisfactory adhesion of gelatin and other water soluble film forming agents to surfaces of cellulose trifatty esters, particularly cellulose triacetate, is accomplished without the use of organic agents. Aqueous emulsions (free of solvents) of polyacrylic esters or their copolymers with vinylesters, vinylethers, vinylchloride or with styrol, are used to form the adhesive layer, on which the gelatine layer is mounted. The emulsions when dry form clear, firmly adhering layers, which do not interfere with the flexibility of the film base. Three examples are added. In German.

PB L 45794. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Process for gluing textiles, weaves, braids of woven or knit bands, straps, or belts made of synthetic threads soluble in organic solvents. (Patent application I 75975 IVd/81) (Enlargement Print of Frames 5309-5310 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 2 p. Price: Microfilm-$1.00 - Photostat-$1.00

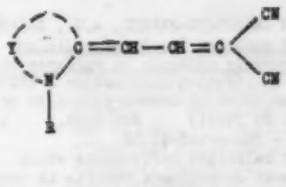
The surfaces to be glued together are first lined with a sheet of thermoplastic material while heat is applied. Subsequently these lined surfaces are glued together with solvents for the lining material. Seven examples are given. In German.

PB L 45795. I.G. FARBENINDUSTRIE A.G., WOLFEN, GERMANY. Process for continuous production of linear polyurethans from diisocyanates and glycols. (Patent application I 75976 IVc/39c) (Enlargement Print of Frames 5311-5315 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00

Linear polyurethans of unifora quality can be continuously produced by the following method. Homogeneous liquid mixtures of equivalent quantities of the polyurethan forming substances are forced through a flow heater kept at the temperature of reaction. Inside this heater the solution of the substances (which contain polyurethan solving agents boiling below 150 degrees) is heated under pressure results after completion of the reaction. The flow heater is built to enable the levels of the solution in the zones of different temperatures to communicate through their gaseous phase. Two variations of this process are described in the text. The molten mass of polyurethan may be directly formed into threads or bristles. One example is added. In German.

PB L 45796. I.G. FARBENINDUSTRIE A.G. Preparation of highly fusible linear polyurethans. (Patent application I 75977 IVc/39c) (Enlargement Print of Frames 5316-5319 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

In the processing of highly fusible linear polyurethans into forms, minor cross linkings often constitute a disturbing factor. According to this invention this difficulty can be overcome by perforaing the final linking to the high polymer with diisocyanates of a minor reactivity. For this purpose linear polyurethans containing alcoholic hydroxyl groups as end groups are reacted at an elevated temperature with diisocyanates having a low reactivity due to their stereochemical structure. The amount of the diisocyanate should be approximately equivalent to the number of the end groups of the polyurethans. Three examples are added. In German.



In this formula Y represents an atom group necessary for the cyclic closing of a 5- or 6-link heterocycle and R an alkyl or aralkyl. Twelve examples are given. In German.

PB L 45802. I.G. FARBENINDUSTRIE A.G. Preparation of halohydrins. (Patent application I 76091 IVd/12o) (Enlargement Print of Frames 5337-5342 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

The conventional method of heating multivalent alcohols with aqueous hydrohalic acids usually produces several degrees of halogenation. These reaction products cannot easily be isolated. This difficulty is avoided, and a better yield achieved, by heating di- or poly-hydroxy compounds with aqueous hydrohalic acids in presence of an extracting agent. This method is particularly suitable for preparation of halohydrins with about 5-8 carbon atoms in the molecule. The extracting agent absorbs the halohydrin formed and thus prevents further substitution. The method is adaptable for continuous process. In this case an extractive is used which is not evaporated with the steam used to separate the produced halohydrins. Three examples are given. In German.

PB L 45803. DEUTSCHE CELLULOID-FABRIK A. G., EILENBURG, GERMANY. Forming of articles from polymerization prod-

ucts of vinyl chloride by pressure molding. (Patent application D 91779 III/39a) (Enlargement Print of Frames 5343-5347 of FIAT Microfilm Reel 145, PB 19921) Oct 1943 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
The principal idea of this invention is to give the objects a preliminary shape, approaching the final shape, but containing grooves, holes, indentations, etc., which allow a more uniform warming of the entire object. This makes for better mechanical qualities after final shaping and cooling. Five diagrams are added. In German.

PB L 45804. I.G. FARBENINDUSTRIE A.G. Preparation of dihydroxy diamine compounds. (Patent application I 76194 IVc/12qu) (Enlargement Print of Frames 5348-5350 of FIAT Microfilm Reel 145, PB 19921) Nov 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
Glyoxal or its soluble polymers are reacted with an excess of nitroparaffins having a reactive hydrogen atom in alpha position to the nitro group. The reaction takes place in the presence of an alkaline catalyst. The products obtained are reduced to the desired amino compounds. One example is added. In German.

PB L 45805. I.G. FARBENINDUSTRIE A.G. Recovery of polyamide wastes. (Patent application I 76238 IVc/12p) (Enlargement Print of Frames 5351-5355 of FIAT Microfilm Reel 145, PB 19921) Nov 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
Polymeric epsilon-caprolactam, alone among the polyamides, may be depolymerized almost quantitatively to the monomeric starting material, thus allowing economical utilization of wastes. The following method is recommended: The polymeric material is melted in an alkaline liquid heated to about 250°C, under exclusion of air; the molten mass is dissociated by distillation at low pressure in presence of alkali acetate at 290-350°C. Potassium acetate may be used for both melting and distilling, but many other substances are possible for the former. Vaporized hydrocarbons or other water non-soluble substances having a boiling point like lactam or slightly higher may be used for stirring. Two examples are added. In German.

PB L 45806. DEUTSCHE CELLULOID-FABRIK, A.G., EILENBURG, GERMANY. Process for applying layers of cellulose derivatives soluble in organic solvents on surfaces of linear polycondensates. (Patent application D 92090 IVc/39b) (Enlargement Print of Frames 5356-5359 of FIAT Microfilm Reel 145, PB 19921) Nov 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The use of a solvent for cellulose derivatives which is a precipitant for linear co-polymers results in very good adhesion of the layer and improves the mechanical qualities of the resulting double layer. Process may be used for manufacturing table covers, oilcloth, etc. One example and one chart are added. In German.

PB L 45807. I.G. FARBENINDUSTRIE A.G. Preparation of differently colored negative and positive partial pictures in a photographic material with one or several light-sensitive layers, especially for preparation of masks. (Patent application I 76240IVa/57b) (Enlargement Print of Frames 5360-5369 of FIAT Microfilm Reel 145, PB 19921) Nov 1943. 10 p. Price: Microfilm-$1.00 - Photostat-$1.00
It was found that positive and negative partial pictures may be obtained in one and the same material by simultaneous simple and reversed development. One or several emulsion layers may be used. In the case of several layers dye components may be used in one layer and not used in the other. Selective second exposure may be used, and selective filter layers may be produced in order to shield some layers against the second exposures. The method may be varied in a number of ways. Its main application is the preparation of "masks" for color correction. Five examples and diagrams are added. In German.

PB L 45808. I.G. FARBENINDUSTRIE A.G. Process for optical sensitization of silver halide emulsions. (Patent application I 76239 IVa/57b) (Enlargement Print of Frames 5370-5373 of FIAT Microfilm Reel 145, PB 19921) Nov 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
It was found that silver halide emulsions may be sensitized by high molecular hydrocarbons consisting of several anellated benzene rings, e.g. perylene. Their further substitution with benzene rings not only increases the intensity of sensitization but shifts its maximum, so that these new sensitizers may be used for the entire visible spectrum. Addition of a wetting agent is advisable. Seven examples are added.

PB L 45809. I.G. FARBENINDUSTRIE A.G. Preparation of shaped structures. (Patent application I 76276 IVc/29b) (Enlargement Print of Frames 5374-5376 of FIAT Microfilm Reel 145, PB 19921) Nov 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00
This proedure has overcome the inconvenience caused by the volatility of the monomeric simple lactams in the melt. Lactam compounds having two or more lactam rings connected by alkylene groups are used instead. Four examples are given. In German.

PB L 45810. I.G. FARBENINDUSTRIE A.G. Apparatus for climatic adjustment of gas, moisture and temperature, sensitive articles especially sheets and films. (Patent application I 76287 IXb/42l1) (Enlargement Print of Frames 5377-5381 of FIAT Microfilm Reel 145, PB 19921) Nov 1943. 5 p. Price: Microfilm-$1.00 - Photostat-$1.00
The device contains a drum which is axially and radially subdivided into many cells so as to allow simultaneous conditioning of many samples. The walls between the cells are perforated in order to allow a free flow of the conditioned air. The device is shown in three drawings. In German.

PB L 45811. I.G. FARBENINDUSTRIE A.G. Preparation of derivatives of symmetric triazine. (Patent application I 76168 IVo/12p) (Enlargement Print of Frames 5382-5387 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00
Alkylated ureas and thioureas are condensed with carbonic acid diethylesters at a temperature above 100° to give symmetric triazine derivatives, useful as intermediates in the production of dyes, pharmaceuticals, and photographic emulsions. Six examples are given. In German.

PB L 45812. DEUTSCHE CELLULOID-FABRIK, A.G., EILENBURG, GERMANY. Splinter protecting screen. (Patent application D 89257 XI/72g) (Enlargement Print of Frames 5388-5391 of FIAT Microfilm Reel 145, PB 19921) Nov 1942. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00
The protecting screen is shaped as a hollow object from thermoplastic polymers, i.e. from vinyl-arcryl- and iso-olefin polymers. This screen is attached to a metal plate and may contain intermediate layers of inorganic materials having a low heat conductivity. The attached drawings are missing. In German.

PB L 45813. DEUTSCHE CELLULOID-FABRIK A.G., EILENBURG, GERMANY. Process for reutilization of boiler waste water. (Patent application D 91903 X/13b) (Enlargement Print of Frames 5392-5394 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 3 p. Price: Microfilm-$1.00 Photostat-$1.00
Waste water from boilers is cooled, passed through an ion exchanger, neutralized if necessary and subsequently freed from salt and alkali content and eventually returned to the feed water purifier or directly to the kettle. In German.

PB L 45814. I.G. FARBENINDUSTRIE A.G. Preparation of polyurethane. (Patent application I 76098 IVc/39c) (Enlargement Print of Frames 5395-5402 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 8 p. Price: Microfilm-$1.00 - Photostat-$1.00

The amino compounds used as starting materials contain hydroxyl and sulfhydryl groups separated by at least three carbon atoms from the next hydrogen carrying amino nitrogen. Amino compounds, carrying two basic nitrogen atoms with one hydrogen atom each, are reacted with esters of bis-chloroformyl acid. The resulting hydroxy polyurethans represent suitable material for textile, fiber, or molded plastic production. Four examples are added. In German.

PB L 45815. I.G. FARBENINDUSTRIE A.G. Production of blue - black and/or brown - black tones on photographs with silver halide layers and simultaneous reduction of the halation. (Patent application I 76126 IVa/57b) (Enlargement Print of Frames 5403-5406 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

The picture is developed in the presence of heterocyclic compound having a quaternary nitrogen and a photographically active sulfur atom in the molecule. Thiazolium and thiazanium compounds are suggested. Eight examples are added. In German.

PB L 45816. I.G. FARBENINDUSTRIE A.G. Preparation of yellow photographic color pictures. (Patent application I 76127 IVa/57b) (Enlargement Print of Frames 5407-5412 of FIAT Microfilm Reel 145, PB 19921) Oct 1943. 6 p. Price: Microfilm-$1.00 - Photostat-$1.00

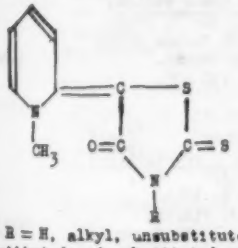
Reaction products from multibasic organic acids with aminoacylacetylarylides containing soluble making groups are used as dye forming substances for the preparation of yellow photographic pictures. They are used especially for subtractive multicolor pictures by means of silver halide layers provided with dye forming compounds previous to the photographic exposure. The diffusion of said dye forming compounds from the colloid layers is impeded. The aryl-, or the aminoacylacetyl-radical, or both of them are provided with substituents impeding the diffusion from the colloidal layers. One example is added. In German.

PB L 45817. DEUTSCHE CELLULOID-FABRIK, A.G., EILENBURG, GERMANY. Preparation of solutions or pastes from re-chlorinated polyvinylchloride. (Patent application D 92180 IVc/22H) (Enlargement Print of Frames 5413-5416 of FIAT Microfilm Reel 145, PB 19921) Dec 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

Substances known as, or acting as, plasticizers having a dipol moment of at least $\mu = 2.3D$ are dissolved in carbontetrachloride. Such solutions of low concentrations are used as solvents for re-chlorinated polyvinylchloride. 40-100% by weight, based on the amount of used polyvinylchloride is the part of the plasticiser. For the activation of carbontetrachloride secondary amines are used which are substituted by -CN, $-NO_1$ $-NO_2$, and —COH groups. The two substituents can be linked directly or over a heterocyclic bridge. By means of this invention uninflammable varnishes may be produced. Six examples are given. In German.

PB L 45818. I.G. FARBENINDUSTRIE A.G. Process for sensitization of silver halide emulsions, especially of silver chloride and bromide emulsions by means of "merocyanin dyes." (Patent application I 76370 IVa/57b) (Enlargement Print of Frames 5417-5420 of FIAT Microfilm Reel 145, PB 19921) Dec 1943. 4 p. Price: Microfilm-$1.00 - Photostat-$1.00

Dyes of the following general formula are used:



Where R = H, alkyl, unsubstituted and substituted phenyl, unsubstituted and substituted arakyl or alkylcarboxylic esters. Three examples are added. In German.

PB L 45819. I. G. FARBENINDUSTRIE A. G. Preparation of polyamides. (Patent application I 76407 IVc/39c) (Enlargement Print of Frames 5421-5423 of FIAT Microfilm Reel 145, PB 19921) Dec 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

N,N'-thiocarbonyl-bis-amino carboxylic acids with at least 5 C-atoms between nitrogen atoms and carboxylic groups are subjected to auto-condensation, if necessary in the presence of formic acid. Two examples are added. In German.

PB L 45820. I. G. FARBENINDUSTRIE A. G. Process for dulling and curling textiles from synthetic linear high polymers. (Patent application I 76436 IVc/8k) (Enlargement Print of Frames 5424-5426 of FIAT Microfilm Reel 145, PB 19921) Dec 1943. 3 p. Price: Microfilm-$1.00 - Photostat-$1.00

Polyamides and polyurethans as well as other synthetic linear high polymers with amide groups in the chain are dulled and curled by treating these polymers with an aqueous solution of compounds forming urea-formaldehyde resins. This treatment is applied in the presence of calcium soap dispersing agent at moderately elevated temperature, not exceeding 60° C. The high polymers are treated previously or simultaneously with polyethylene amine. Three examples are added. In German.

MISCELLANEOUS

PB L 70432. DEUTSCHES MUSEUM, PATENTARCHIV, MUNICH, GERMANY. Patents in various fields. (FIAT Microfilm Reel E 29, Frames 4-919) 1928-1943. 915 f. Price: Microfilm-$6.00 - Enlargement print-$91.50

This reel consists of 352 patents issued by the German Patent office from Dec. 1943 to Nov. 1944. The patent numbers range from 743 930 to 744 000, 743 601 to 743 700, and 744 001 to 744 200 (some patents are missing). The individual patents are listed below and will be available as enlargement prints only; the entire reel may be purchased in microfilm form for $6.00. Please include PB, patent and frame numbers when ordering individual items. In German.

Frames	Title	Price
4-5 PB L 70432	WILLERS, HANS-BODO, BERLIN. Network for influencing the amplitude of oscillations depending on their frequency. Ger. patent 743 930, Jan 5, 1944. Application I 61 067 VIIIa/21a² dated Apr 13, 1938. Inventor: Ahier, J. In German. Wiring diagrams.	$1.50
6-7 PB L 70432	TELEFUNKEN GES. FÜR DRAHTLOSE TELEGRAPHIE M.B.H., BERLIN. Adjustment for high frequency variometer. Ger. patent 743 931, Jan 7, 1944. Application T 52 476 VIIIa/21a⁴ dated Jul 2, 1939. Inventors: Witthöft, H. and others. In German. Drawing.	1.50
8-10 PB L 70432	ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Remote control for heavy objects such as rudders. Ger. patent 743 932, Jan 5, 1944. Application L 96 829 VIIIb/21c dated Jan 13, 1939. Inventor: Pfister, K. In German. Wiring diagram.	1.50
11-12 PB L 70432	WILLERS, HANS-BODO, BERLIN. Process for manufacture of capacitors which consist of alternate metal and dielectric layers contained between two rigid plates enclosed in a synthetic resin case. Ger. patent 743 933, Jan 5, 1944. Application I 60 216 VIIIc/21g dated Nov 11, 1938. Inventors: Leno, J. and Edwards, J. In German. Drawings.	1.50

13-16 PB L 70432 WILLERS, HANS-BODO, BERLIN. Wave filter with several elements in series which contain piezoelectric crystals as impedances. Ger. patent 743 934, Jan 13, 1944. Application I 62 670 VIIIc/21g dated Oct 15, 1938. Inventor: Sykes, R. In German. 1.50
Wiring diagrams.

17-18 PB L 70432 GRAETZ A.G., BERLIN. Heating element for electric stoves and hot plates. Ger. patent 743 935. Application E 55 170 VIIIc/21h dated Aug 8, 1941. Inventor: Howald, M. In German. 1.50
Drawings.

19-22 PB L 70432 SCHUBERT & SALZER MASCHINENFABRIK A.G., CHEMNITZ. Drive for thread guide rails of flat hosiery knitting machines. Ger. patent 743 936, Jan 17, 1944. Application Sch 113 332 VII/25a dated Jul 16, 1937. In German. 1.50
Drawings.

23-24 PB L 70432 SACHSENWERK, LICHT UND KRAFT A.G., NIEDERSEDLITZ. Centrifugal fan. Ger. patent 743 939, Jan 6, 1944. Application S 128 877 Ia/27c dated Sep 26, 1937. Inventor: Hartwagner, L. In German. 1.50
Drawing.

25-26 PB L 70432 BRÜXER VERBANDSTOFF-WERKE, ADOLF FISCHER, BRÜX. Hemorrhoidal bandage for men. Ger. patent 743 940, Jan 7, 1944. Application B 191 036 IXa/30d dated Jun 26, 1940. Inventors: Schaffer, W. and Seuss, F. In German. 1.50
Drawings.

27-30 PB L 70432 STOLLENWERK G.M.B.H., POTSDAM. Litter with sled runners. Ger. patent 743 941, Jan 6, 1944. Application St 60 237 IXa/30e dated Nov 23, 1940. Inventors: Stollenwerk, H. and others. In German. 1.50
Drawings.

31-32 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Soap-like skin cleansing preparations (such as powder bases). Ger. patent 743 942, Jan 6, 1944. Application I 67 140 Wa/30h dated Jun 6, 1940. Inventors: Brodersen, K. and Quaedvlieg, M. In German. 1.50

33-34 PB L 70432 FISCHER, A. (Inventor). Method and equipment for production of core sand. Ger. patent 743 943, Jan 6, 1944. Application F 90 243 VIa/31c dated Jul 12, 1941. In German. 1.50
Drawings.

35-36 PB L 70432 CREMER, L. (Inventor). Coffee percolator. Ger. patent 743 944, Sep 15, 1944. Application C 53 761 X/34 1 dated Aug 19, 1934. In German. 1.50
Drawings.

37-39 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Method for production of waterproof films, impregnations, etc., from polymers insoluble in water, and stable at room temperatures containing a small amount of hydrophile groups. Ger. patent 743 945, Jan 6, 1944. Application I 67 187 IVc/39b dated Jun 13. 1940. Inventors: Fikentscher, H. and Gäth, R. In German. 1.50

40-43 PB L 70432 CHRONOS-WERK REUTHER & REISERT, K.G., HENNEF. Counter for automatic scales. Ger. patent 743 946, Jan 7, 1944. Application C 55 397 IXb/42f dated Sep 12, 1939. Inventors: Richars, P. and Hovenbitzer, M. In German. 1.50
Drawings.

44-47 PB L 70432 WALTHER, CARL, WAFFENFABRIK, ZELLA-MEHLIS. Calculating machine with semi-automatic multiplication. Ger. patent 743 947, Jan 8, 1944. Application W 105 541 IXb/42m dated Apr 25, 1939. In German. 1.50
Drawings.

48-49 PB L 70432 KEMPE, F. (Inventor). Device to detect corrosion of insulated pipelines, especially in refrigeration plants. Ger. patent 743 948, Jan 6, 1944. Application K 160 273 IXb/43a dated Feb 22, 1941. In German. 1.50
Drawing.

50-51 PB L 70432 GEBR. RÖBER G.M.B.H., WUTHA. Seed pickling machine. Ger. patent 743 949, Jan 6, 1944. Application R 104 650 III/45b dated Mar 3, 1939. Inventor: Röber, P. In German. 1.50
Drawings.

52-53 PB L 70432 HEINKEL, ERNST, WARNEMÜNDE. Turbocompressor for internal combustion engines. Ger. patent 743 950, Jan 7, 1944. Application H 163 447 Ia/46a9 dated Oct 18, 1940. Inventor: Karde, K. In German. 1.50
Drawing.

54-55 PB L 70432 BOSCH, ROBERT, G.M.B.H., STUTTGART. Fully screened spark plug. Ger. patent 743 951, Jan 6, 1944. Application B 189 914 Ia/46c3 dated Feb 23, 1940. Inventors: Beesch, O. and Kleem, E. In German. 1.50

56-57 PB L 70432 HEINKEL, ERNST, FLUGZEUGWERKE, G.M.B.H., SEESTADT. Flap control rods for cowling of air-cooled aircraft engines, radiator shutters, etc. Ger. patent 743 952, Jan 6, 1944. Application H 158 621 Ia/46c4 dated Feb 11, 1939. Inventor: Göpel, E. In German. 1.50

58-60 PB L 70432 METZGER, KARL, LUDWIGSBURG. Method and apparatus for removal of exhaust gases from O2-supplied internal combustion submarine engines. Ger. patent 743 953, Jan 6, 1944. Application M 150 390 IVb/46c6 dated Mar 29, 1941. Inventor: Schweizer, R. In German. 1.50

61-64 PB L 70432 HÄHNLE, H. (Inventor). Method for achieving effective power ratios. Ger. patent 743 954, Jan 7, 1944. Application H 131 481 Ia/46d dated Apr 20, 1932. In German. 1.50
Supplement to patent 730 631.
Drawing.

65-67 PB L 70432 HIRSCHMANN, M. (Inventor). Yield of gold and gold alloy precipitates from continuous baths. Ger. patent 743 955, Jan 6, 1944. Application H 163 237 VIa/48a dated Sep 21, 1940. In German. 1.50

68-72 ALLGEMEINE ELECTRICITÄTS GES.,

PB L 70432 BERLIN. Control for shell-end milling machines. Ger. patent 743 957, Jan 6, 1944. Application L 100 776 Ib/49b dated May 9, 1940. Inventor: Schmid, W. In German. 1.50
Supplement to patent 738 284. Wiring diagrams.

73-75 PB L 70432 BERTHOLD, K. (Inventor). Process for the manufacture of perforated metal objects (such as costume jewelry). Ger. patent 743 958, Jan 6, 1944. Application B 182 007 Ib/49 l dated Feb 15, 1938. In German. 1.50

75-77 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Equipment for checking camera shutters and synchronous devices for flashlight attachments. Ger. patent 743 959, Jan 7, 1944. Application L 103 857 IXa/57a dated Apr 6, 1941. Inventor: Kearsly, W. In German. 1.50

78-80 PB L 70432 HENSCHEL FLUGZEUG-WERKE A.G., SCHÖNEFELD. Crank-type swivel gun mount for rapid fire aircraft guns. Ger. patent 743 960, Jan 6, 1944. Application H 152 308 XI/62b dated Jul 13, 1937. Inventors: Borchert, F. and Saalfeld, E. In German. 1.50

81-83 PB L 70432 ANWANDER, C. (Inventor). Three-sided tipping device for truck bodies. Ger. patent 743 961, Jan 6, 1944. Application A 93 993 II/63c dated Aug 26, 1941. In German. 1.50
Drawings.

84-86 PB L 70432 KEDRA WERKE, KETTEN, DRAHT, UND DRAHTSTIFTWERKE PFLEIDERER, AALEN. Nonskid device for caterpillar tracks. Ger. patent 743 962, Jan 8, 1944. Application K 160 968 II/63d dated May 1, 1941. Inventor: Hengst, A. In German. 1.50

87-88 PB L 70432 TELEFUNKEN GES. FÜR DRAHTLOSE TELEGRAPHIE M.B.H., BERLIN. Circuit for producing a signal such as an airraid warning signal, with ascending and descending tone, by means of a grid-controlled gas tube. Ger. patent 743 963, Jan 6, 1944. Application T 49 947 VIIIb/74d dated Feb 10, 1938. Inventor: Eichelberg, E. In German. 1.50
Supplement to patent 718 269. Wiring diagrams.

89-91 PB L 70432 KLUFTINGER, H. (Inventor). Tape drawing frame with a roll for pressing the tape forming an arc of contact. Ger. patent 743 964, Aug 6, 1944. Application K 160 931 VII/76c dated Apr 27, 1941. In German. 1.50
Drawings.

92-93 PB L 70432 GMINDER, ULRICH, G.M.B.H. Wet process for fine spinning. Ger. patent 743 965, Jan 6, 1944. Application G 103 401 VII/76c dated Apr 23, 1941. Inventor: Gminder, E. In German. 1.50
Supplement to patent 737 706.

94-95 PB L 70432 KOY, E. (Inventor). Counterweights for cranes, elevators, etc. Ger. patent 743 966, Jan 6, 1944. Application K 159 114 VIb/80b dated Oct 27, 1940. In German. 1.50

96-98 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Production of dinitriles. Ger. patent 743 967, Jan 18, 1944. Application P 79 817 IVd/12o dated Sep 28, 1939. In German. 1.50

99-100 PB L 70432 KNORR BREMSE A.G., STAHLWERKE, VOLMARSTEIN. Train axle bearing for constant circulation. Ger. patent 743 968, Jan 6, 1944. Application E 50 094 II/20d dated Dec 9, 1931. In German. 1.50
Drawings.

101-103 PB L 70432 ALLGEMEINE ELEKTRICITÄTS, GES., BERLIN. Circuit breaker with arc extinction. Ger. patent 743 969, Jan 6, 1944. Application L 98 296 VIIIb/21c dated Jun 24, 1939. Inventor: Petermichl, F. In German. 1.50
Supplement to patent 730 505. Drawings.

104-105 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Circuit breaker with arc extinction. Ger. patent 743 970, Jan 6, 1944. Application L 98 298 VIIIb/21c dated Jun 24, 1939. Inventor: Petermichl, F. In German. 1.50
Supplement to patent 730 505. Drawings.

106-107 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Circuit breaker with arc extinction. Ger. patent 743 971, Jan 6, 1944. Application L 98 299 VIIIb/21c dated Jun 24, 1939. Inventor: Petermichl, F. In German. 1.50
Supplement to patent 730 505. Drawings.

108-109 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Circuit breaker with arc extinction. Ger. patent 743 972, Jan 6, 1944. Application L 98 308 VIIIb/21c dated Jun 25, 1939. Inventor: Petermichl, F. In German. 1.50
Supplement to patent 730 505. Drawings.

110-112 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Circuit breaker with arc extinction. Ger. patent 743 973, Jan 6, 1944. Application L 98 311 VIIIb/21c dated Jun 25, 1939. Inventor: Petermichl, F. In German. 1.50
Supplement to patent 730 505. Drawings.

113 PB L 70432 FUCHS, A. (Inventor). Moth preventative. Ger. patent 743 974, Jan 6, 1944. Application F 89 771 IVa/45 l dated Oct 12, 1940. In German. 1.50
Supplement to patent 731 339.

114-116 PB L 70432 VERLAG FÜR PARAGRAPHENDIENST, VELDER & CO., BERLIN. Loose-leaf form for reference purposes. Ger. patent 743 975, Jan 6, 1944. Application V 33 868 VII/54b dated May 28, 1937. Inventor: Velder, K. In German. 1.50

117-118 PB L 70432 STAEDLER, J.S., CO., NÜRNBERG. Surface treatment for wooden pencils. Ger. patent 743 976, Jan 6, 1944. Application St 61 274 IVd/75c dated Nov 25, 1941. Inventor: Loy, G. In German. 1.50
Supplement to patent 726 617.

119-121 PB L 70432 GESELLSCHAFT FÜR FÖRDERANLAGEN, ERNST HECKEL G.M.B.H., SAARBRÜCKEN. Process for dressing coal and simi-

lar materials in an easily separated heavy sludge. Ger. patent 743 977, Nov 16, 1944. Application G 98 490 VIb/1c dated Aug 20, 1938. Inventor: Trempelmann, E. In German. 1.50

122-124 PB L 70432 LORO & PARISINI, MILAN, ITALY. Agitator for scum floating machine. Ger. patent 743 978, Jan 6, 1944. Application L 104 263 VIb/1c dated May 15, 1941. In German. Drawings. 1.50

125-128 PB L 70432 KÄUFLEIN, F. (Inventor). Single-handed double valve for welding torches and gas blowpipes. Ger. patent 743 979, Jan 6, 1944. Application K 158 950 VIb/1g dated Oct 15, 1940. In German. Drawings. 1.50

129-131 PB L 70432 GEBR. EICKHOFF MASCHINENFABRIK UND EISENGIESSEREI, BOCHUM. Machine for cutting mine tunnels, particularly for drainage purposes. Ger. patent 743 980, Jan 6, 1944. Application E 52 636 VIb/5b dated Jun 7, 1939. Inventor: Vorthmann, F. In German. Drawings. 1.50

132-133 PB L 70432 F.W. MOLL SÖHNE, WITTEN. Iron mine-construction. Ger. patent 743 981, Jan 6, 1944. Application M 144 547 VIb/5c dated Mar 17, 1939. In German. Drawings. 1.50

134-135 PB L 70432 MANNESMANNRÖHREN-WERKE, DÜSSELDORF. Mine ventilation equipment with provision for drawing off mountain heat. Ger. patent 743 982, Jan 6, 1944. Application M 149 651 VIb/5d dated Jan 15, 1941. Inventor: Tenthoff, W. In German. Drawings. 1.50

136-138 PB L 70432 VON HIPPEL, H. (Inventor). Conveyor method for coal or ores. Ger. patent 743 983, Jan 6, 1944. Application H 165 117 VIb/5d dated Apr 17, 1941. In German. 1.50

139-141 PB L 70432 STICH, E. (Inventor). Process and equipment for ventilating fermenting liquids. Ger. patent 743 984, Jan 6, 1944. Application St 57 861 IVa/6a dated Sep 16, 1938. In German. Drawing. 1.50

142-143 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Substitutes for antifoaming agents. Ger. patent 743 985, Jan 6, 1944. Application I 70 458 IVa/6a dated Sep 17, 1941. Inventors: Brodersen, K. and Quaedvlieg, M. In German. 1.50

144-145 PB L 70432 CHEMISCHE FABRIK PROMONTA G.M.B.H., HAMBURG. Process for recovery of protoevlytic enzymes from urine. Ger. patent 743 986, Jan 11, 1944. Application C 56 821 IVa/6a dated Oct 11, 1941. In German. 1.50

146-148 PB L 70432 CRAMER, H. (Inventor). Combination tilting and parallel lifting table for rolling mills. Ger. patent 743 987, Jan 6, 1944. Application C 55 744 Ib/7a dated Apr 12, 1940. In German. 1.50

149-151 PB L 70432 PAPST, ERNST, CO., AUE. Spindle for wet yarn winding. Ger. patent 743 988, Jan 6, 1944. Application P 77 037 VII/8a dated Mar 26, 1938. In German. Drawings. 1.50

152-153 PB L 70432 RASMUSSEN, C. (Inventor). Spinner type washing machine. Ger. patent 743 989, Jan 6, 1944. Application R 105 780 VII/8d dated Aug 5, 1939. In German. Drawing. 1.50

154-155 PB L 70432 STENVERS, F. (Inventor). Piston-operated washing machine. Ger. patent 743 990, Jan 6, 1944. Application St 56 590 VII/8d dated Sep 11, 1937. In German. Drawings. 1.50

156-157 PB L 70432 DAHLMANN, EUGEN, DUSSELDORF. Trough for ironer with heating channels. Ger. patent 743 991, Jan 6, 1944. Application D 80 282 VII/8d dated Apr 19, 1939. Inventor: Schwamm, K. In German. Drawings. 1.50

158-160 PB L 70432 HEBERLEIN & CO., A.G., WATTWIL, SWITZERLAND. Process for printing designs on fabrics of cellulose fibers with organic dyes insoluble in water, by parchmentizing the printed portions. Ger. patent 743 983, Jan 6, 1944. Application H 156 354 IVd/8n dated Jul 2, 1938. Inventors: Weiss, E. and Lorenz, F. In German. 1.50

161-162 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Process for dyeing cellulose fibers in the form of piece goods, etc., with sulfur dyes. Ger. patent 743 992, Jan 11, 1944. Application I 65 481 IVd/8m dated Aug 18, 1939. Inventors: Hansen, H. and Pässler, W. In German. 1.50

163-166 PB L 70432 BAYERISCHE STICKSTOFF WERKE A.G., BERLIN. Process and equipment for cooling and crushing fusible calcium carbide. Ger. patent 743 994, Jan 6, 1944. Application B 199 328 IVb/12i dated Aug 23, 1942. Inventors: Wotschke, J. and Steinbrück, G. In German. Drawings. 1.50

167-168 PB L 70432 STEINKOHLENBERGWERKE "RHEINPREUSSEN," HOMBERG. Process for increasing the purity of the gas used in the Fischer-Tropsch process. Ger. patent 743 995, Jan 6, 1944. Application St 57 247 IVd/12o dated Mar 17, 1938. In German. 1.50

169-170 PB L 70432 CHEMISCHE FABRIK R. BAUMHEIER K.G., OSCHATZ. Method for producing substances active in lowering surface tension from pyridine. Ger. patent 743 996, Jan 6, 1944. Application C 53 609 IVc/12p dated Jan 25, 1938. Inventor: Schiedewitz, H. In German. 1.50

171-172 PB L 70432 GÖDL, S. (Inventor). Charging device for oven chambers. Ger. patent 743 997, Jan 6, 1944. Application G 105 841 VIa/18c dated Aug 1, 1942. In German. Supplement to patent 740 417. Drawings. 1.50

173-176 PB L 70432 SIEMENS SCHUCKERTWERKE A.G., BERLIN. Trolley wire arrangement for electric railways. Ger. patent 743 998, Jan 7, 1944. Application S 132 934 VIIId/20k dated Jul 10, 1938. In-

ventors: Wahlberg, N. and Crouse, J. In German. 1.50
Drawings.

177-179 PB L 70432 — SIEMENS SCHUCKERTWERKE A.G., BERLIN. Separators for trolley wires for electric railways. Ger. patent 743 999, Jan 7, 1944. Application S 144 875 VIIId/20k dated Apr 11, 1941. Inventor: Arms, H. In German. 1.50
Drawings.

180-181 PB L 70432 — SIEMENS SCHUCKERTWERKE A.G., BERLIN. Control for electric trains. Ger. patent 744 000, Jan 7, 1944. Application S 149 931 dated Apr 16, 1942. Inventors: Vogel, C. and Ulrich, F. In German. 1.50
Supplement to patent 728 230.
Wiring diagram.

182-183 PB L 70432 — LÜTGERDING, G. (Inventor). Base for ointments. Ger. patent 743 601, Dec 29, 1943. Application L 109 363 IVa/30h dated Oct 25, 1942. In German. 1.50

184-185 PB L 70432 — RASCHIG, F., G.M.B.H., LUDWIGSHAFEN. Binding materials for foundry molds. Ger. patent 743 602, Dec 29, 1943. Application R 112 277 VIa/31c dated Feb 26, 1942. Inventors: Dreher, E. and Hummel, F. In German. 1.50

186-187 PB L 70432 — WIELAND WERKE A.G., ULM. Die for extrusion casting of pipes. Ger. patent 743 603, Dec 29, 1943. Application W 111 710 VIa/31c dated Sep 25, 1942. Inventor: Schwarzmaier, W. In German. 1.50
Drawings.

188-189 PB L 70432 — FRANZEN, P. (Inventor). Ornamental flower pot covering. Ger. patent 743 604, Dec 29, 1943. Application F 89 701 X/34f dated Mar 25, 1941. In German. 1.50
Drawing.

190-191 PB L 70432 — BATA A.G., ZLIN, CZECHOSLOVAKIA. Production of synthetic rubber from polymers of butadiene. Ger. patent 743 605, Dec 29, 1943. Application B 194 520 IVc/39b dated Jun 6, 1941. Inventor: Cech, J. In German. 1.50

192-193 PB L 70432 — SIEMENS SCHUCKERTWERKE A.G., BERLIN. Process for coating wire, thread, etc., with highly polymeric polystyrol. Ger. patent 743 607, Dec 1, 1943. Application S 127 859 IVc/39b dated Jun 26, 1937. Inventor: Müller, H. In German. 1.50
Drawing.

194-195 PB L 70432 — KRZEDORN, W. (Inventor). Dental alloys. Ger. patent 743 608, Jan 4, 1944. Application K 158 291 VIc/40b dated Aug 1, 1940. In German. 1.50

196-198 PB L 70432 — FORSTER, A. (Inventor). Mechanical surface testing device. Ger. patent 743 609, Dec 29, 1943. Application F 90 787 IXb/42b dated Nov 8, 1941. In German. 1.50
Supplement to patent 740 781.
Drawings.

199-200 PB L 70432 — KERSTING, W. (Inventor). Tendency indicator for instruments. Ger. patent 743 610, Dec 29, 1943. Application K 151 949 IXb/42d dated Sep 25, 1938. In German. 1.50
Drawings.

201-202 PB L 70432 — SIEMENS & HALSKE A.G., BERLIN. Wide range ring manometer. Ger. patent 743 611, Dec 31, 1943. Application S 147 285 IXb/42k dated Oct 15, 1941. In German. 1.50
Drawings.

203-204 PB L 70432 — HILDEBRANDT, F. and VIEWEG, R. (Inventors). Temperature-compensated electric resistance manometer. Ger. patent 743 612, Dec 31, 1943. Application H 161 618 IXb/42k dated Feb 17, 1940. In German. 1.50

205-206 PB L 70432 — UHDE, FRIEDRICH, DORTMUND. Device for measuring high gas or fluid pressures. Ger. patent 743 613, Dec 29, 1943. Application U 14 118 IXb/42k dated Dec 14, 1937. Inventors: Hoffmann, O. and Francke, W. In German. 1.50
Drawing.

207-210 PB L 70432 — BECK, E. (Inventor). Device for automatic indication of the production of two or more machine tools attended by a single operator. Ger. patent 743 614, Dec 29, 1943. Application B 196 524 IXb/42m dated Dec 19, 1941. In German. 1.50
Drawings.

211-213 PB L 70432 — TRAWINSKI, H. (Inventor). Air speed indicator. Ger. patent 743 615, Dec 30, 1943. Application T 56 082 IXb/42c dated Aug 19, 1941. In German. 1.50
Wiring diagram.

214-215 PB L 70432 — LIMBACH, R. (Inventor). Apparatus for producing mechanical vibrations. Ger. patent 743 616, Dec 30, 1943. Application L 105 171 IXb/42s dated Aug 22, 1941. In German. 1.50

216-218 PB L 70432 — MIKSCHE, F. (Inventor). Opposed piston engine. Ger. patent 743 617, Dec 30, 1943. Application M 155 039 Ia/46a10 dated Aug 11, 1942. In German. 1.50
Drawings.

219-222 PB L 70432 — AEROPLANI CAPRONI SOCIETA ANONIMA and OTTAVIO FUSCALDO, MILAN, ITALY. Fuel injection regulator for internal combustion engines. Ger. patent 743 618, Jan 3, 1944. Application A 87 359 Ia/46b^2 dated Jul 2, 1938. Inventor: Fuscaldo, O. In German. 1.50
Drawings.

223-225 PB L 70432 — AEROPLANI CAPRONI SOCIETA ANONIMA and OTTAVIO FUSCALDO, MILAN, ITALY. Electromagnetic injection valve for internal combustion engines. Ger. patent 743 620, Dec 30, 1943. Application A 90 232 Ia/46c^2 dated Sep 16, 1939. Inventor: Fuscaldo, O. In German. 1.50
Drawings.

226-229 PB L 70432 — BECORIT GESELLSCHAFT WILHELM BECKMANN & CO., and others. Lining for driving pulleys (of mine conveyors). Ger. patent 743 621, Dec 30, 1943. Application B 190 141 XII/47b dated Mar 14, 1940. Inventor: Uffelmann, E. In German. 1.50
Drawings.

230-232 PB L 70432 — SAUVEUR, H. (Inventor). Shutoff valve in which the spindle is sealed by a bellows-type diaphragm. Ger. patent 743 622, Dec 30, 1943.

Application S 140 218 XII/47g dated Feb 22, 1940. In German. 1.50
Drawing.

233-234 PB L 70432 ZEISS IKON A.G., DRESDEN. Portable sound motion picture projector. Ger. patent 743 623, Jun 10, 1944. Application Z 26 300 IXa/57a dated Mar 9, 1941. Inventor: Küppenbender, H. In German. 1.50
Drawing.

235-236 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Copper plate printing process. Ger. patent 743 624, Dec 30, 1943. Application I 71 080 IVa/57b dated Dec 12, 1941. Inventor: Weyde, E. In German. 1.50

237-239 PB L 70432 RISZDORFER, O. (Inventor). Exposure meter for a photographic enlarger. Ger. patent 743 627, Dec 30, 1943. Application R 98 367 IXa/57c dated Mar 15, 1935. In German. 1.50
Drawings.

240-241 PB L 70432 OCHSMANN, E. (Inventor). Baby-carriage with a rocking body. Ger. patent 743 628, Dec 30, 1943. Application O 25 502 II/63b dated Jun 25, 1942. In German. 1.50
Drawings.

242-244 PB L 70432 IMBERT GENERATOREN G.M.B.H., COLOGNE. Purifier for automotive wood-gas producers. Ger. patent 743 629, Dec 30, 1943. Application I 68 556 II63c dated Dec 24, 1940. Inventors: Müller, R. and Buscher, H. In German. 1.50
Drawings.

245-247 PB L 70432 RHEINMETALL-BORSIG A.G., BERLIN. Self locking automotive differential gears. Ger. patent 743 630, Nov 17, 1944. Application R 110 016 II/63c dated May 8, 1941. Inventors: Berkenkemper, T. and Freyler, A. In German. 1.50
Drawings.

248-251 PB L 70432 DEUTSCHE WERKE KIEL A.G., KIEL. Pneumatic gear shift for automotive transmissions. Ger. patent 743 631, Dec 30, 1943. Application D 80 264 II/63c dated Apr 18, 1939. Inventors: Lüthje, F. and Ehreus, K. In German. 1.50
Drawings.

252-253 PB L 70432 AUTO UNION A.G., CHEMNITZ. Automotive shock absorption system. Ger. patent 743 632, Aug 23, 1944. Application A 95 232 II/63c dated Mar 10, 1942. Inventor: Boxan, W. In German. 1.50
Drawings.

254-256 PB L 70432 RÖBIG, A. (Inventor). Joint for automotive tie rods and steering rods. Ger. patent 743 633, Dec 30, 1943. Application R 113 750 dated Aug 13, 1942. In German. 1.50
Drawings.

257-258 PB L 70432 TEVES, ALFRED, MASCHINEN UND ARMATURENFABRIK K.G., FRANKFURT A.M. Hydraulic fluid container for automotive brakes. Ger. patent 743 635, Jan 17, 1944. Application T 58 709 II/63c dated Feb 12, 1943. Inventor: Huhn, M. In German. 1.50

259-260 PB L 70432 VOGEL, L. (Inventor). Dashboard-installed hydraulic fluid container for automotive brakes. Ger. patent 743 636, Dec 30, 1943. Application V 39 316 II/63c dated Nov 4, 1942. In German. 1.50
Drawings.

261-262 PB L 70432 WESTFÄLISCHE METALL INDUSTRIE, A.G., LIPPSTADT. Warning signal mounted on the roof of a motor vehicle to indicate the presence of trailers. Ger. patent 743 637, Dec 30, 1943. Application W 110 364 II/63c dated Jan 30, 1942. Inventor: Schroiff, F. In German. 1.50
Drawings.

263-264 PB L 70432 HORNKOHL, THEODOR, METALLWARENFABRIK, BREMEN. Gasoline-type automotive heater. Ger. patent 743 638, Dec 30, 1943. Application H 164 652 II/63c dated Feb 21, 1941. Inventor: Wolf, H. In German. 1.50
Drawing.

265-266 PB L 70432 KOENIG-FACHSENFELD, R. (Inventor). Air-conditioning system for motor vehicles. Ger. patent 743 639, Dec 30, 1943. Application K 158 649 dated Sep 10, 1940. In German. 1.50
Drawings.

267-269 PB L 70432 HASLER, D. (Inventor). Automobile fuel tank. Ger. patent 743 640, Dec 2, 1944. Application H 167 805 II/63c dated Mar 14, 1942. In German. 1.50
Drawings.

270-272 PB L 70432 KUPFER-ASBEST CO., GUSTAVE BACH, HEILBRONN. Ball and socket-type mount for rear view mirrors, spotlights, etc., on motor vehicles. Ger. patent 743 641, Dec 30, 1943. Application K 163 152 II/63c dated Dec 21, 1941. Inventor: Gutmann, H. In German. 1.50
Drawing.

273-274 PB L 70432 REICHSTEIN, C. (Inventor). Spring-type automobile tire. Ger. patent 743 642, Dec 30, 1943. Application R 112 651 II/63e dated Apr 11, 1942. In German. 1.50
Drawings.

275-277 PB L 70432 FICHTEL & SACHS A.G., SCHWEINFURT. Disengaging lever for trip locking mechanisms (for bicycles with three speeds). Ger. patent 743 644, Jan 21, 1944. Application F 93 743 II/63k dated Jul 30, 1943. Inventor: Dotter, P. In German. 1.50
Drawings.

278-280 PB L 70432 FICHTEL & SACHS A.G., SCHWEINFURT. Device on foot-operated three speed transmissions to prevent bypassing second gear (for motorcycles). Ger. patent 743 645, Dec 30, 1943. Application F 92 263 II/63k dated Aug 7, 1942. Inventor: Steinlein, G. In German. 1.50
Drawings.

281-282 PB L 70432 WERNER, FRITZ, BERLIN. Grinding wheel for backing off grooved work pieces, especially form cutters and thread mills. Ger. patent 743 646, Feb 25, 1944. Application W 111 485 XII/67a dated Aug 13, 1942. Inventors: Bornmüller, F. and Möller, G. In German. 1.50
Drawings.

283-286 PB L 70432 RZEZACZ, P. (Inventor). Process and equipment for dressing minerals by means of a heavy sludge. Ger. patent 743 647, Aug 28, 1944. Appli-

cation R 101 919 VIb/1c dated Mar 24, 1938. In German. 1.50
Drawings.

287-289 PB L 70432 — GEBR. EICKHOFF MASCHINENFABRIK U. EISENGIESSEREI, BOCHUM. Coal cutting machine. Ger. patent 743 648, Dec 30, 1943. Application E 54 147 VIb/5b dated Nov 9, 1940. Inventor: Zapp, E. In German. 1.50
Drawings.

290-291 PB L 70432 — RHEINMETALL-BORSIG A.G., BERLIN. Development of the ascending pipe of steam generators. Ger. patent 743 649, Dec 30, 1943. Application R 107 189 X/13a dated Mar 20, 1940. Inventor: Meier, W. In German. 1.50

292-293 PB L 70432 — DEUTSCHE BABCOCK & WILCOX, DAMPFKESSEL-WERKE A.G., OBERHAUSEN. Water tube boiler. Ger. patent 743 650, Dec 30, 1943. Application D 84 445 X/13a dated Feb 22, 1941. Inventor: Brunn, J. In German. 1.50
Drawing.

294-295 PB L 70432 — DEUTSCHE BABCOCK & WILCOX, DAMPFKESSEL-WERKE A.G., OBERHAUSEN. Radiation boiler. Ger. patent 743 651, Dec 30, 1943. Application D 89 566 X/13a dated Dec 23, 1942. Inventor: Adolf, A. In German. 1.50
Drawings.

296-298 PB L 70432 — ANSALDO S.A., GENOA, ITALY. Feedwater regulator with vaporization and condensation of a controlling liquid. Ger. patent 743 652, Dec 30, 1943. Application A 90 689 X/13b dated Jan 3, 1940. Inventor: Cortese, C. In German. 1.50

299-301 PB L 70432 — LENTZ, H. (Inventor). Rotary head for fire-tube superheater. Ger. patent 743 653, Oct 2, 1944. Application L 108 425 X/13d dated Jul 14, 1942. In German. 1.50
Drawings.

302-303 PB L 70432 — DEUTSCHE BABCOCK & WILCOX, DAMPFKESSEL-WERKE A.G., OBERHAUSEN. Superheater suspension for sectional-header boilers. Ger. patent 743 654, Dec 30, 1944. Application D 86 637 X/13d dated Dec 25, 1941. Inventor: Bollwerk, H. In German. 1.50
Drawings.

304-305 PB L 70432 — L. & C. STEINMÜLLER, GUMMERSBACH. Water separator for steam boilers. Ger. patent 743 655, Dec 30, 1943. Application St 59 976 X/13d dated Aug 22, 1940. Inventor: Fuchs, H. In German. 1.50
Drawings.

306-308 PB L 70432 — MARTIN, O. (Inventor). Locomotive steam generator with indirect heating. Ger. patent 743 656, Dec 30, 1943. Application M 151 251 X/13g dated Jul 1, 1941. In German. 1.50
Drawings.

309-311 PB L 70432 — BEUTHNER, K. (Inventor). Vertical chamber furnace for coal distillation. Ger. patent 743 657, Dec 30, 1943. Application B 191 454 dated Aug 11, 1940. In German. 1.50
Supplement to patent 740 510.
Drawings.

312-315 PB L 70432 — HYDRO NITRO S.A. U. MIECZYSLAW, JOSEF KALOUS, GENEVA, SWITZERLAND. Apparatus for conversion of nitrous gases of ammonia combustion to nitric acid. Ger. patent 743 658, Dec 30, 1943. Application N 42 157 IVb/12i dated Jun 29, 1938. Inventor: Kalous, M. In German. 1.50
Drawings.

316-317 PB L 70432 — I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Production of N-substituted aminocarboxylic acids. Ger. patent 743 661, Jan 4, 1944. Application I 66 925 IVc/12q dated Apr 27, 1940. Inventors: Krzikalla, H. and Alt, W. In German. 1.50

318-319 PB L 70432 — SABALITSCHKA, THEODOR, U. NÄHRMITTEL-FABRIK JULIUS PENNER A.G., BERLIN. Process for improving the water solubility of esters of p- or m-hydroxybenzoic acid. Ger. patent 743 662, Dec 30, 1943. Application S 148 316 IVc/12q dated Dec 31, 1941. Inventors: Sabalitschka, T. and Durczin, A. In German. 1.50

320-322 PB L 70432 — DREIER, E. (Inventor). Hand-brake for narrow-gauge railway cars. Ger. patent 743 663, Dec 30, 1943. Application D 84 933 II/20f dated Feb 27, 1941. In German. 1.50
Drawings.

323-325 PB L 70432 — LÖFFLER, P. (Inventor). Device for blocking a railway car on a turntable, traveling platform, or on elevators. Ger. patent 743 664, Dec 30, 1943. Application L 106 008 II/20g dated Nov 21, 1941. In German. 1.50
Drawings.

326-327 PB L 70432 — LORENZ, C., A.G., BERLIN. Electromagnetic recording device for phototelegraphy. Ger. patent 743 666, Dec 31, 1943. Application L 108 396 VIIIa/21a^1 dated Jul 10, 1942. Inventor: Wegener, G. In German. 1.50
Drawing.

328-330 PB L 70432 — FERNSEH G.M.B.H., BERLIN. Scanning device for television transmission. Ger. patent 743 667, Dec 30, 1943. Application F 82 842 VIIIa/21a^1 dated Apr 13, 1937. In German. 1.50
Drawings.

331-333 PB L 70432 — ELECTRICAL FONO-FILMS CO., A/S, COPENHAGEN, DENMARK. Amplitude limiter control. Ger. patent 743 668, Dec 30, 1943. Application E 53 745 VIIIa/21a^2 dated Jun 20, 1940. Inventor: Schlegel, K. In German. 1.50
Wiring diagrams.

334-336 PB L 70432 — TELEFUNKEN GES. FÜR DRAHTLOSE, TELEGRAPHIE M.B.H., BERLIN. Adapter for transition from balanced to unbalanced high frequency grounding. Ger. patent 743 669, Dec 30, 1943. Application T 56 137 VIIIa/21a^4 dated Sep 3, 1941. Inventor: Buschbeck, H. In German. 1.50
Drawings.

337-339 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Magnet core for choke coils of commutators. Ger. patent 743 670, Dec 30, 1943. Application L 102 660 VIIId/21a^2 dated Dec 8, 1940. Inventors: Sixtus, K. and Koppelmann, F. In German. 1.50
Drawings.

340-343 PB L 70432 — HANS-BODO WILLERS. Magnetic control with D.C. premagnetized choke

coil. Ger. patent 743 671, Dec 30, 1943. Application K 138 694 VIIId/21d^2 dated Jul 23, 1935. In German. 1.50
Wiring diagrams.

344-346 PB L 70432 FISCHER, A. (Inventor). Wind driven generator. Ger. patent 743 672, Dec 30, 1943. Application F 88 084 VIIId/21d^3 dated Mar 12, 1940. In German. 1.50
Drawing.

347-348 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Process for production of azo dyes. Ger. patent 743 673, Jan 11, 1944. Application I 56 603 IVd/22a dated Dec 13, 1936. Inventors: Schultis, C. and Korten, E. In German. 1.50
Supplement to patent 671 911.

349-350 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT, A.M. Process for production of vat dyes. Ger. patent 743 674, Dec 30, 1943. Application I 68 946 IVd/22b dated Feb 22, 1941. Inventor: Braun, #. In German. 1.50

351-352 PB L 70432 GESELLSCHAFT FÜR CHEMISCHE INDUSTRIE, BASEL, SWITZERLAND. Process for production of indigoid vat dyes. Ger. patent 743 675, Jan 6, 1944. Application G 96 525 IVd/22e dated Oct 26, 1937. Inventors: Fröhlich, J. and others. In German. 1.50

353-357 PB L 70432 GESELLSCHAFT FÜR CHEMISCHE INDUSTRIE, BASEL, SWITZERLAND. Process for production of quinhydrones. Ger. patent 743 676, Dec 30, 1943. Application G 98 953 IVd/22e dated Nov 15, 1938. Inventors: Kambli, E. and others. In German. 1.50

358-361 PB L 70432 GESELLSCHAFT FÜR CHEMISCHE INDUSTRIE, BASEL, SWITZERLAND. Process for production of vat dyes. Ger. patent 743 677, Dec 30, 1943. Application G 99 059 IVd/22e dated Dec 1, 1938. Inventors: Kern, W. and others. In German. 1.50

362-364 PB L 70432 GELSENKIRCHENER BERGWERKS, A.G., BOCHUM. Process for converting melted pitch into small-sized pieces. Ger. patent 743 678, May 30, 1944. Application G 104 040 IVc/22h dated Sep 6, 1941. Inventor: Speckhardt, G. In German. 1.50
Drawing.

365-367 PB L 70432 N.V. DE BATAAFSCHE PETROLEUM MAATSCHAPPIJ, THE HAGUE, HOLLAND. Process for separating azeotropic mixtures. Ger. patent 743 679, Dec 30, 1943. Application N 43 830 IVd/23b dated Feb 10, 1940. Inventors: Yabroff, D. and White, E. In German. 1.50
Drawing.

368-369 PB L 70432 KLÖCKNER HUMBOLDT DEUTZ A.G., COLOGNE. Shaped-brick masonry for conical fireboxes of gas producers. Ger. patent 743 680, Dec 30, 1943. Application K 163 823 V/24e dated Feb 27, 1942. Inventor: Wohlschläger, H. In German. 1.50
Drawings.

370-371 PB L 70432 KLÖCKNER HUMBOLDT DEUTZ A.G., COLOGNE. Shaped-brick masonry for conical fireboxes of automotive gas producers. Ger. patent 743 682, Aug 21, 1944. Application K 166 431 V/24e dated Sep 25, 1942.
Inventor: Wohlschläger, H.
In German. 1.50
Drawings.

372-373 PB L 70432 KLÖCKNER HUMBOLDT DEUTZ A.G., COLOGNE. Automotive gas producer with down-draft carburetion. Ger. patent 743 683, Dec 30, 1943. Application K 159 622 V/24e dated Dec 22, 1940. Inventor: Keienburg, H. In German. 1.50
Drawing.

374-376 PB L 70432 DEUTSCHE BABCOCK & WILCOX, DAMPFKESSEL-WERKE A.G., OBERHAUSEN. Process for producing ignition powder for coal dust firing. Ger. patent 743 684, Dec 30, 1943. Application D 81 226 V/24 1 dated Sep 20, 1939. Inventor: Seidl, H. In German. 1.50
Drawings.

377-379 PB L 70432 DEUTSCHE BABCOCK & WILCOX, DAMPFKESSEL-WERKE A.G., OBERHAUSEN. Coal dust firing for radiation boilers. Ger. patent 743 685, Dec 30, 1943. Application D 83 162 V/24 1 dated Aug 18, 1940. Inventor: Kölling, J. In German. 1.50
Drawings.

380-381 PB L 70432 VEREINIGTE KESSELWERKE, A.G., DÜSSELDORF. Coal dust furnace. Ger. patent 743 686, Dec 30, 1943. Application V 36 263 V/24 1 dated Nov 1, 1939. Inventor: Piedboeuf, T. In German. 1.50
Drawing.

382-384 PB L 70432 STENTA, ERWIN, BERLIN U. FRATEMA G.M.B.H., GEISER. Apparatus for braiding thread. Ger. patent 743 687, Dec 30, 1943. Application S 135 336 VII/25c dated Dec 15, 1936. Inventor: Seim, C. In German. 1.50
Drawings.

385-386 PB L 70432 KURMÄRKISCHE ZELLWOLLE UND ZELLWOLLE A.G., WITTENBERGE and others. Process for purification of reviving solutions in rayon production. Ger. patent 743 688, Dec 30, 1943. Application P 82423 IVc/29b dated May 3, 1941. Inventors: Siehr, A. and Motz, F. In German. 1.50

387-389 PB L 70432 KOLLER, E. (Inventor). Collapsible stretcher. Ger. patent 743 689, Dec 31, 1943. Application K 164 780, IXa/30e dated May 21, 1942. In German. 1.50
Drawings.

390-391 PB L 70432 KONZE, P. (Inventor). Spring attachment for caves. Ger. patent 743 690, Dec 31, 1943. Application K 163 580 IXa/30f dated Feb 5, 1942. In German. 1.50
Drawings.

392-394 PB L 70432 HILGERS, M. (Inventor). Massaging device. Ger. patent 743 691, Dec 31, 1943. Application H 160 043 IXa/30f dated Jul 7, 1939. In German. 1.50
Drawings.

395-397 PB L 70432 SCHENK, H. and SPRUNG, W. (Inventors). Electric steam pot for massage, shaving, and inhalation purposes. Ger. patent 743 692, Dec 31, 1943. Appli-

cation Sch 122 266 IXa/30f dated Apr 1, 1941. In German. 1.50
Drawings.

398-399 PB L 70432 — ZENZEN, J. (Inventor). Thermo drinking vessel. Ger. patent 743 693, Apr 19, 1944. Application Z 25 410 IXa/30g dated Aug 1, 1939. In German. 1.50
Drawing.

400-401 PB L 70432 — RUSS ELEKTROOFEN K.A., COLOGNE. Low frequency induction furnace. Ger. patent 743 694, Dec 31, 1943. Application R 110 427 VIa/31a dated Jun 25, 1941. Inventor: Vierhaus, W. In German. 1.50
Drawings.

402-403 PB L 70432 — LAUZ, HEINRICH, A.G., MANNHEIM. Apparatus for heating molds in flue gas. Ger. patent 743 695, Dec 31, 1943. Application L 104 345 VIa/31a dated May 20, 1941. Inventors: Tobias, P. and others. In German. 1.50
Drawings.

404-406 PB L 70432 — HUNDT & WEBER G.M.B.H., GEISWEID. Method for operating foundry baking ovens. Ger. patent 743 696, Dec 31, 1943. Application H 165 016 VIa/31a dated Mar 29, 1941. Inventor: Salzer, W. In German. 1.50
Drawings.

407-408 PB L 70432 — JOHANSEN, O. (Inventor). Process for casting metals difficult to fuse. Ger. patent 743 697, Dec 31, 1943. Application J 74 671 VIa/31c dated Jul 9, 1942. In German. 1.50

409-412 PB L 70432 — KODAK A.G., BERLIN. Process for production of resin esters. Ger. patent 743 698, Jan 8, 1944. Application K 156 701 IVc/39b dated Feb 10, 1940. Inventors: McNally, J. and Van Dyke, R. In German. 1.50

413-416 PB L 70432 — SOCIÉTÉ ANONYME DITE: USINES DECOUFLÉ and GASTON DEBAECKER., PARIS. Apparatus for weighing equal quantities of fibrous materials (such as tobacco). Ger. patent 743 699, Apr 25, 1944. Application S 135 281 IXb/42f dated Jan 4, 1939. Inventor: Debaecker, G. In German. 1.50
Drawings.

417-419 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Process for chronological reproduction of arbitrary sections of a sound track for control purposes. Ger. patent 743 700, Feb 25, 1944. Application A 62 402 IXa/42g dated Jun 21, 1931. In German. 1.50
Drawings.

420-421 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Electric brake control for multiple street cars. Ger. patent 744 001, Jan 7, 1944. Application L 104 556 VIIId/20 l dated Jun 10, 1941. Inventor: Dozler, E. In German. 1.50
Wiring diagram.

422-423 PB L 70432 — TELEFUNKEN GES., FÜR DRAHTLOSE, TELEGRAPHIE M.B.H., BERLIN. Amplifier or receiver with two parallel terminal amplifier stages. Ger. patent 744 002, Jan 7, 1944. Application T 48 606 VIIIa/21a[2] dated May 12, 1937. Inventor: Schairer, A. In German. 1.50
Wiring diagram.

424-426 PB L 70432 — SIEMENS & HALSKE, A.G., BERLIN. Hookup for frequency group selector plugs in telephone systems. Ger. patent 744 003, Jan 7, 1944. Application S 143 129 VIIIa/21a[3] dated Nov 30, 1940. Inventor: Sobotta, K. In German. 1.50
Wiring diagram.

427-429 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Automatic switch control for power distribution stations. Ger. patent 744 004, Jan 7, 1944. Application L 95 977 VIIIb/21c dated Oct 27, 1938. Inventor: Anderson, A. In German. 1.50
Wiring diagram.

430-432 PB L 70432 — FABRIK ELEKTR. STEUERAPPARATE, RUDOLF KNOTE, LEIPZIG. High voltage cut-out. Ger. patent 744 005, Jan 7, 1944. Application F 90 496 VIIIb/21c dated Sep 10, 1941. Inventor: Loos, P. In German. 1.50
Drawings.

433-435 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Circuit breaker for high voltage installations. Ger. patent 744 006, Jan 7, 1944. Application S 129 261 VIIIb/21c dated Oct 26, 1937. Inventor: Lassig, G. In German. 1.50
Drawing.

436-437 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Screw cap for electric fuses. Ger. patent 744 007, Jan 7, 1944. Application L 105 287 VIIIb/21c dated Sep 4, 1941. Inventor: Wehrle, C. In German. 1.50
Drawing.

438-440 PB L 70432 — "ELIN" UND SCHORCH WERKE A.G., FÜR ELEKTRISCHE INDUSTRIE, BERLIN. Spark gap for excess voltage arrester. Ger. patent 744 008, Jan 7, 1944. Application E 55 301 VIIIb/21c dated Sep 21, 1941. Inventors: Mansinger, H. and Hochrainer, A. In German. 1.50
Drawings.

441-443 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Arrangement for improving the performance of contra-parallel connected insulated electrodes serving for protection against excess voltage. Ger. patent 744 009, Jan 7, 1944. Application L 96 373 VIIIb/21c dated Nov 27, 1938. Inventor: Hessenberg, K. In German. 1.50
Wiring diagrams.

444-445 PB L 70432 — NIEMANN, H. (Inventor). Electric motor with planetary gear coaxially located on the shaft. Ger. patent 744 010, Jan 7, 1944. Application N 45 195 VIIId/21d[1] dated Nov 11, 1941. In German. 1.50
Supplement to patent 722 820.
Drawings.

446-447 PB L 70432 — PAPST, H. (Inventor). Indirectly heated hot cathode for vacuum tubes. Ger. patent 744 011, Jan 7, 1944. Application P 77 766 VIIIc/21g dated Aug 16, 1938. In German. 1.50

448-450 PB L 70432 SIEMENS & HALSKE A.G., BERLIN. Socket for vacuum tubes with electrostatically shielded leads. Ger. patent 744 012, Jan 7, 1944. Application S 136 072 VIIIc/21g dated Feb 28, 1939. Inventor: Espe, W. In German. Drawing. 1.50

451-453 PB L 70432 SIEMENS & HALSKE A.G., BERLIN. Electrode mounting for a radio tube. Ger. patent 744 013, Jan 7, 1944. Application S 134 907 VIIIc/21g dated Dec 8, 1938. Inventor: Harmisch, M. In German. Drawings. 1.50

454-455 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Production of carbon or graphite parts for radio tubes, especially short-wave tubes. Ger. patent 744 014, Jan 7, 1944. Application A 80 323 VIIIc/21g dated Aug 25, 1936. In German. 1.50

456-458 PB L 70432 PHILIPS PATENTVERWALTUNG G.M.B.H., BERLIN. Cathode ray tube with two electrodes perpendicular to each other and operated by asymmetrical deflecting voltage. Ger. patent 744 015, Jan 7, 1944. Application N 41 898 VIIIc/21g dated Apr 26, 1938. Inventors: de Gier, J. and Janssen, J. In German. Drawing. 1.50

459-460 PB L 70432 PATENT-TREUHAND GES. FÜR ELEKTRISCHE GLÜHLAMPEN M.B.H., BERLIN. Process for production of photoelectric resistance cells. Ger. patent 744 016, Jan 7, 1944. Application P 81 016 VIIIc/21g dated Jul 20, 1940. Inventor: Frerichs, R. In German. 1.50

461-462 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Process for production of monoazo dyes. Ger. patent 744 017, Jan 11, 1944. Application I 66 056 IVd/22a dated Nov 30, 1939. Inventors: Zerweck, W. and Kunze, W. In German. 1.50

463-464 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Process for production of diazo dyes. Ger. patent 744 018, Jan 11, 1944. Application I 67 368 IVd/22a dated Jul 10, 1940. Inventors: Petersen, S. and Taube, K. In German. 1.50

465-466 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Process for production of violet to blue basic water-soluble dyes. Ger. patent 744 019, Jan 11, 1944. Application I 66 032 IVd/22e dated Nov 28, 1939. Inventors: Eistert, B. and Kochendoerfer, G. In German. 1.50

467-468 PB L 70432 CIRIUS-WERKE BÖHME & LORENZ, CHEMNITZ. Process for production of paint colors. Ger. patent 744020, Jan 7, 1944. Application C 55 572 IVc/22g dated Jan 3, 1940. Inventor: Pfanner, J. In German. 1.50

469-470 PB L 70432 ROGALL, A. (Inventor). Process for manufacture of a detergent. Ger. patent 744021, Jan 7, 1944. Application R 99 313 IVc/22g dated Jun 2, 1937. In German. 1.50

471-472 PB L 70432 TH. GOLDSCHMIDT A.G., ESSEN. Lubricant for use in wire-drawing. Ger. patent 744 022, Jan 7, 1944. Application G 103 792 IVd/23c dated Jul 9, 1941. Inventors: Schrader, H. and Havestadt, L. In German. 1.50

473-475 PB L 70432 TIMME, K. (Inventor). Degreasing process for skins, leather or furs. Ger. patent 744 023, Jan 7, 1944. Application T 55 929 VII/28b dated Jul 18, 1941. In German. Drawings. 1.50

476-477 PB L 70432 HAMEL, CARL, A.G., SIEGMAR. Process for production of wool-like rayon thread. Ger. patent 744 024, Jan 7, 1944. Application H 153 213 VII/29a dated Oct 9, 1937. Inventor: Hamel, E. In German. Drawing. 1.50

478-479 PB L 70432 KISNITZ, G. (Inventor). Process for production of spinnable fibers from chemically softened wood. Ger. patent 744 025, Nov 15, 1944. Application K 158 017 IVc/29b dated Jul 4, 1940. In German. 1.50

480-481 PB L 70432 VEREINIGTE GLANZSTOFF FABRIKEN A.G., WUPPERTAL. Process for finishing viscose rayon. Ger. patent 744 026, Jan 7, 1944. Application V 35 267 IVc/29b dated Sep 30, 1938. Inventor: Frohwein, H. In German. Supplement to patent 625 355. Drawing. 1.50

482-486 PB L 70432 MERK, H. (Inventor). Production method and equipment for vacuum filling of ampoules. Ger. patent 744 027, Jan 7, 1944. Application M 154 018 IXa/30g dated Apr 25, 1942. In German. Drawings. 1.50

487-488 PB L 70432 I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Disinfectant and preservative. Ger. patent 744 028, Jan 7, 1944. Application I 66 753 IVa/30i dated Mar 24, 1940. Inventors: Kuhn, R. and others. In German. 1.50

489-491 PB L 70432 METALLGUSSWERK, EDMUND NESTLER, DRESDEN. Device to prevent metal overflow from the inlet gate of tiltable molds. Ger. patent 744 029, Jan 7, 1944. Application M 152 189 VIa/31c dated Oct 23, 1941. In German. Drawings. 1.50

492-495 PB L 70432 VEREINIGTE LEICHTMETALL-WERKE G.M.B.H., HANNOVER. Extrusion casting process for light-metal ingots. Ger. patent 744 030, Jan 7, 1944. Application V 35 788 VIa/31c dated Mar 23, 1939. Inventor: Brenner, P. In German. Drawings. 1.50

496-497 PB L 70432 VEREINIGTE DEUTSCHE METALLWERKE A.G., FRANKFURT A.M. Process for production of multiple work pieces (welded together). Ger. patent 744 031, Jan 7, 1944.

Application V 36 160 VIa/31c dated Sep 1, 1939. Inventor: von Forster, H. In German. 1.50

498-499 PB L 70432 WAAGNER-BIRO A.G., VIENNA, AUSTRIA. Joining of wooden spars and structural iron sections, such as I-beams. Ger. patent 744 032, Jan 7, 1944. Application W 109 507 V/37b dated Aug 24, 1941. Inventor: Klassek, J. In German. 1.50
Drawings.

500-501 PB L 70432 BAKELITE G.M.B.H., ERKENER. Process for production of plastics from urea derivatives and solid polymeric aldehydes. Ger. patent 744 033, Jan 7, 1944. Application B 139 332 IVc/39c dated Sep 14, 1928. Inventor: Süssenguth, O. In German. 1.50
Supplement to patent 721 916.

502-503 PB L 70432 G.A. SCHEID'SCHE AFFINERIE, VIENNA, AUSTRIA. Silver alloys. Ger. patent 744 034, Jan 7, 1944. Application Sch 121 939 VIa/40b dated Feb 11, 1941. Inventor: Scheid, L. In German. 1.50

504-505 PB L 70432 METALLGESELLSCHAFT A.G., FRANKFURT A.M. Process for modification of aluminum-silicon alloys. Ger. patent 744 035, Jan 7, 1944. Application M 123 124 VIa/40b dated Mar 4, 1933. In German. 1.50

506-508 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Electromagnetic dynamometer. Ger. patent 744 036, Jan 7, 1944. Application L 103 160 IXb/42k dated Feb 2, 1941. Inventor: Hermann, P. In German. 1.50
Drawings.

509-511 PB L 70432 LATOUR, M. (Inventor). Structural member for metal frames (for electrical machinery). Ger. patent 744 037, Jan 7, 1944. Application L 96 528 IXb/42n dated Dec 13, 1938. In German. 1.50
Drawings.

512-514 PB L 70432 LAUBE, F. (Inventor). Process and equipment for setting plants in spherical molds consisting of an earth-manure mixture. Ger. patent 744 038, Jan 7, 1944. Application L 107 200 III/45f dated Mar 18, 1942. In German. 1.50
Drawings.

515-517 PB L 70432 BAYERISCHE MOTOREN WERKE A.G., MUNICH. Throttle for supercharged aircraft engines. Ger. patent 744 039, Jan 7, 1944. Application B 180 725 Ia/46b^2 dated Nov 17, 1937. Inventor: Friz, M. In German. 1.50
Drawing.

518-520 PB L 70432 KLÖCKNER-HUMBOLDT-DEUTZ, A.G., COLOGNE. Cylinder head for multi cylinder internal combustion engines. Ger. patent 744 040, Jan 7, 1940. Application K 156 340 Ia/46c^1 dated Dec 28, 1939. In German. 1.50
Drawings.

521-523 PB L 70432 EISENMANN, E. (Inventor). Light-metal pistons for internal combustion engines. Ger. patent 744 041, Jan 7, 1944. Application E 55 531 dated Nov 29, 1941. In German. 1.50
Drawings.

524-526 PB L 70432 ROHRBACH, H. (Inventor). Internal combustion engine with hydraulic pistons. Ger. patent 744 042, Jan 7, 1944. Application R 104 207 Ia/46f dated Jan 5, 1939. In German. 1.50
Drawings.

527-528 PB L 70432 PFISTER & LANGHAUSS, NÜRNBERG. Valve head with visible spindle (for plumbing valves). Ger. patent 744 043, Jan 7, 1944. Application P 82 534 XII/47g dated May 22, 1941. In German. 1.50
Drawing.

529-530 PB L 70432 MAHLE K.G., STUTTGART. Process for coating light-metal alloy pistons for internal combustion engines. Ger. patent 744 044, Jan 7, 1944. Application M 151 796 VIa/48a dated Sep 5, 1941. Inventor: Meyer-Rässler, E. In German. 1.50
Supplement to patent 695 182.

531-532 PB L 70432 SCHERING A.G., BERLIN. Galvanizing process for zinc and zinc alloys. Ger. patent 744 045, Jan 7, 1944. Application Sch 121 893 VIa/48a dated Feb 4, 1941. Inventor: Korpiun, J. In German. 1.50

533-534 PB L 70432 KIESKEMER, P. (Inventor). Process for producing hard, wear-resistant coatings on aluminum and aluminum alloys. Ger. patent 744 046, Jan 8, 1944. Application K 152 506 VIa/48a dated Nov 23, 1938. In German. 1.50

535-538 PB L 70432 SPIESS, G. (Inventor). Equipment for removing and conveying sheet-metal plates from a liquid bath. Ger. patent 744 047, Jan 8, 1944. Application K 157 720 VIa/48b dated May 24, 1940. In German. 1.50
Drawings.

539-540 PB L 70432 GEORG BENDA-LUTZWERKE, G.M.B.H., TRAISMAUER. Process for degreasing aluminum or magnesium powder. Ger. patent 744 048, Jan 8, 1944. Application L 196 227 VIa/48d dated Nov 11, 1941. Inventor: Lutz, F. In German. 1.50
Drawing.

541-543 PB L 70432 VOMAG VOGTLÄNDISCHE MASCHINENFABRIK A.G., PLAUEN. Safety-return for feeler gages on precision boring mills. Ger. patent 744 049, Jan 8, 1944. Application V 38 175 Ib/49a dated Oct 29, 1941. Inventor: Pomsel, F. In German. 1.50
Drawing.

544-545 PB L 70432 MASCHINENFABRIK DEUTSCHLAND G.M.B.H., DORTMUND. Variable supplementary support for the base of boring mills for locomotive rod bearings. Ger. patent 744 050, Jan 8, 1944. Application M 149 934 Ib/49a dated Feb 13, 1941. Inventors: Schneider, W. and Schulze, O. In German. 1.50
Drawings.

546-548 PB L 70432 — WERNER, FRITZ, A.G., BERLIN. Control for high speed milling machines. Ger. patent 744 051, Jan 8, 1944. Application # 110 386 Ib/49b dated Feb 7, 1942. Inventor: Lappe, W. In German. Drawing. 1.50

549-550 PB L 70432 — DÜRENER METALLWERKE A.G., BERLIN. Adjustment for the cutting angle of end milling cutters. Ger. patent 744 052, Jan 8, 1944. Application D 83 829 Ib/49b dated Nov 23, 1940. Inventor: Schild, A. In German. Drawings. 1.50

551-552 PB L 70432 — FORSCHUNGSINSTITUT FÜR GETREIDE-CHEMIE, DARMSTADT. Process for increasing the baking capacity of wheat flour. Ger. patent 744 053, Jan 8, 1944. Application F 85 523 IVa/53c dated Jul 2, 1937. In German. 1.50

553-554 PB L 70432 — NORDMARK WERKE G.M.B.H., HAMBURG. Process for albumen extraction from blood. Ger. patent 744 054, Jan 8, 1944. Application N 45 558 IVa/53i dated Apr 3, 1942. Inventor: Borchers, A. In German. 1.50

555-557 PB L 70432 — AUTO UNION A.G., CHEMNITZ. Automotive gears. Ger. patent 744 056, Jan 8, 1944. Application A 88 270 II/63c dated Oct 12, 1938. In German. Drawings. 1.50

558-559 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Control equipment for automotive Diesel engines. Ger. patent 744 057, Jan 8, 1944. Application L 101 860 VIIIb/74b dated Sep 19, 1940. Inventor: Walter, K. In German. 1.50

560-561 PB L 70432 — HACKBART, E. and others (Inventors). Installation for transmission of messages from several points to a central office. Ger. patent 744 058, Jan 8, 1944. Application H 158 786 VIIIb/74c dated Feb 16, 1939. In German. Wiring diagrams. 1.50

562-563 PB L 70432 — LORENZ, C., A.G., BERLIN. Face angle indication by means of a cathode ray tube. Ger. patent 744 059, Jan 8, 1944. Application L 99 103 VIIIb/74c dated Sep 3, 1939. Inventor: Teichmann, B. In German. Drawings. 1.50

564-566 PB L 70432 — ATLAS WERKE A.G., BREMEN. Rangefinding by means of sound waves. Ger. patent 744 060, Jan 8, 1944. Application A 88 706 VIIIb/74a dated Dec 28, 1938. Inventor: Hellenstein, R. In German. Drawings. 1.50

567-568 PB L 70432 — BARMER MASCHINENFABRIK A.G., WUPPERTAL. Double-wire thread spindle. Ger. patent 744 061, Jan 8, 1944. Application B 192 971 VII/76c dated Jan 11, 1941. Inventor: Bochmann, O. In German. Drawing. 1.50

569-570 PB L 70432 — VOORTMANN, T. (Inventor). Plug for drilled holes for blasting purposes. Ger. patent 744 063, Jan 8, 1944. Application V 35 441 IVb/78e dated Nov 29, 1938. In German. Drawings. 1.50

571-573 PB L 70432 — STRÄTLING, W. & SCHWIETE, E. (Inventors). Process for production of cement mixtures. Ger. patent 744 064, Jan 13, 1944. Application St 56 443 VIb/80b dated Jul 25, 1937. In German. 1.50

574-586 PB L 70432 — DEUTSCHE HOLERITH MASCHINEN G.M.B.H., BERLIN. Clock installation consisting of a central clock and auxiliary clocks. Ger. patent 744 065, Jan 13, 1944. Application D 83 761 VIIIb/83b dated Nov 16, 1940. Inventor: Bryce, J. In German. Drawings and wiring diagrams. 1.50

587-589 PB L 70432 — POEGE & CO., APPARATE U. MASCHINENBAU K.G., GÖGGINGEN. Device for separating threads from cross-woven warps for warp knitting machines. Ger. patent 744 066, Jan 8, 1944. Application P 77 974 VII/86h dated Sep 30, 1938. Inventor: Poege, M. In German. Drawings. 1.50

590-591 PB L 70432 — WITT, W. (Inventor). Device for transfer of pattern lines and marks to fabrics by means of a colored liquid. Ger. patent 744 067, Jan 8, 1944. Application W 105 812 VII/3d dated Jun 9, 1939. In German. Drawings. 1.50

592-593 PB L 70432 — HARBURGER GUMMIWAREN-FABRIK PHOENIX A.G., HAMBURG. Sleeve for drill rod socket joints. Ger. patent 744 068, Jan 8, 1944. Application H 167 112 VIb/5a dated Dec 19, 1941. Inventor: Gros, K.

594-596 PB L 70432 — NEUENBURG, H. (Inventor). Coal cutting machine. Ger. patent 744 069, Jan 20, 1944. Application N 43 863 VIb/5b dated Mar 1, 1940. In German. 1.50

597 PB L 70432 — KÜRTH, R. (Inventor). Fermenting vats for the air-yeast process. Ger. patent 744070, Jan 8, 1944. Application K 145 792 IVa/6a dated Mar 17, 1936. In German. 1.50

598-599 PB L 70432 — STICH, E. (Inventor). Process for decreasing foam formation in fermenting vats. Ger. patent 744 071, Jan 8, 1944. Application St 61 202 IVa/6a dated Oct 29, 1941. In German. 1.50

600-601 PB L 70432 — LUX, F. (Inventor). Process for enrichment of beer and similar beverages with vitamins, etc. Ger. patent 744 072, Jan 8, 1944. Application L 103 104 IVa/6b dated Jan 25, 1941. In German. 1.50

602-604 PB L 70432 — GESELLSCHAFT FÜR CHEMISCHE INDUSTRIE, BASEL, SWITZERLAND. Process for dyeing acetate rayons with dyes insoluble in water. Ger. patent 744 073, Jan 17, 1944. Application G 101 730 IVd/8m dated May 18, 1940. Inventor: Felix, F. In German. 1.50

605-606 PB L 70432 — MASCHINENFABRIK FRIEDRICH HAAS K.G., REMSCHEID. Process for drying fabrics. Ger. patent 744 074, Jan 8, 1944. Application M 143 292 VII/8b dated Nov 8, 1938. Inventor: Haas, H. In German. 1.50

607-609 PB L 70432 — I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Process and apparatus for carrying out catalytic gas reactions. Ger. patent 744 075, Jan 8, 1944. Application I 65 343 IVb/12g dated Aug 3, 1939. Inventors: Pfannmüller, J. and Reichart, J. In German. Drawings. 1.50

610-611 PB L 70432 — METALLGESELLSCHAFT A.G., FRANKFURT A.M. Catalytic process for conversion of carbon monoxide and hydrogen-containing gas mixtures to hydrocarbons. Ger. patent 744 076, Jan 11, 1944. Application M 138 086 IVd/12o dated May 16, 1937. Inventor: Herbert, W. In German. 1.50

612-613 PB L 70432 — METALLGESELLSCHAFT A.G., FRANKFURT A.M. Process for production of high-boiling hydrocarbons such as paraffin, by catalytic conversion of carbon monoxide and hydrogen-containing gases. Ger. patent 744 077, Jan 11, 1944. Application M 138 697 IVd/12o dated Jul 18, 1937. Inventor: Herbert, W. In German. 1.50

614-615 PB L 70432 — METALLGESELLSCHAFT A.G., FRANKFURT A.M. Process for production of hydrocarbons by hydrogenation of carbon monoxide. Ger. patent 744 078, Jan 8, 1944. Application M 139 309 IVd/12o dated Sep 26, 1937. Inventor: Herbert, W. In German. 1.50

616-617 PB L 70432 — I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Process for production of fatty acids from crude paraffin. Ger. patent 744 079, Jan 8, 1944. Application I 67 223 IVd/12o dated Jun 20, 1940. Inventors: Keunicke, A. and Mienburg, H. In German. 1.50

618-619 PB L 70432 — THIELE, C. (Inventor). Process for production of fatty acids by ozonizing olefinic hydrocarbon mixtures. Ger. patent 744 080, Jan 11, 1944. Application T 50 522 IVd/12o dated Jun 12, 1938. In German. 1.50

620-622 PB L 70432 — I.G. FARBENINDUSTRIE A.G., FRANKFURT A.M. Process for production of 2-methyl-3-butyn-2-ol. Ger. patent 744 081, Jan 11, 1944. Application I 62 008 IVd/12o dated Jul 21, 1938. Inventors: Pesta, O. and Ebel, F. In German. 1.50

622-623 PB L 70432 — KALI-CHEMIE A.G., BERLIN. Process for production of sinter phosphates. Ger. patent 744 082, Jan 7, 1944. Application K 157 081 dated Mar 16, 1940. Inventor: Marschner, W. In German. 1.50

624-625 PB L 70432 — JOST, W. (Inventor). Soil improving agent for cultivation of waste lands such as moors. Ger. patent 744 083, Jan 13, 1944. Application J 70 276 IVb/16 dated Aug 20, 1941. In German. 1.50

626-628 PB L 70432 — HOMANN-WERKE WILHELM HOMANN, WUPPERTAL. Mechanical refrigerator. Ger. patent 744 084, Jan 8, 1944. Application H 163 272 Ia/17a dated Sep 26, 1940. In German. Drawings. 1.50

629-631 PB L 70432 — OEHLSCHLÄGEL, H. (Inventor). Mechanical refrigerator (especially for use in the tropics). Ger. patent 744 085, Jan 8, 1944. Application M 153 020 dated Jan 21, 1942. In German. Drawings. 1.50

632-634 PB L 70432 — HAZELTINE CORPORATION, JERSEY CITY, N.J. Circuit for regulation of the amplification coefficient of a vacuum tube. Ger. patent 744 086, Jan 8, 1944. Application H 157 020 VIIIa/21a^2 dated Sep 4, 1938. Inventor: Farrington, J. In German. Wiring diagram. 1.50

635-636 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Negative A.C. resistance. Ger. patent 744 087, Jan 8, 1944. Application dated Feb 18, 1938. Inventor: Stäblein, W. In German. Wiring diagram. 1.50

637-639 PB L 70432 — SIEMENS & HALSKE A.G., BERLIN. Loud-speaking telephone with feed-back block. Ger. patent 744 088, Jan 8, 1944. Application S 132 034 VIIIa/21a^2 dated May 10, 1938. Inventor: Seiffert, B. In German. Wiring diagram. 1.50

640-642 PB L 70432 — SIEMENS & HALSKE A.G., BERLIN. Circuit for linearization control of an amplifier based on negative feed-back. Ger. patent 744 089, Jan 17, 1944. Application S 141 524 VIIIa/21a^2 dated Jul 2, 1940. Inventor: Wittekindt, W. In German. Wiring diagram. 1.50

643-645 PB L 70432 — HAGEN, GOTTFRIED A.G., COLOGNE. Mounting for steel plates in battery cases. Ger. patent 744 090, Jan 8, 1944. Application H 165 875 IVb/21b dated Jul 20, 1941. Inventor: Bezon, H. In German. Drawings. 1.50

646-648 PB L 70432 — N.V. FABRIEK VAN ELEKTRISCHE APPARATEN, HENGELO, HOLLAND. Method for the construction, repair or test of insulators or contacts contained in an oil-filled housing. Ger. patent 744 091, Jan 8, 1944. Application N 44 809 VIIIb/21c dated Jun 8, 1941. Inventor: de Rook, H. In German. Drawing. 1.50

649-651 PB L 70432 — MIX & GENEST A.G., BERLIN. Lever switch for release of alarm signals in telecommunications installations. Ger. patent 744 092, Jan 8, 1944. Application M 151 788 VIIIb/21c dated Sep 2, 1941. Inventor: Buck, B. In German. Drawings. 1.50

652-654 PB L 70432 — SIEMENS APPARATE UND MASCHINEN G.M.B.H., BERLIN. Circuit for the control of battery chargers, etc. Ger. patent 744 093, Jan 8, 1944. Application S 138 175 VIIIb/21c, dated Aug 8, 1939. Inventor: Hasse, H. In German. 1.50
Drawings.

655-657 PB L 70432 — LANDIS & GYR A. G., ZUG, SWITZERLAND. Process for group remote control of hot water feed systems, display lighting equipment, etc., over a special circuit. Ger. patent 744 094, Jan 8, 1944. Application L 97895 VIIIb/21c, dated May 5, 1939. Inventor: Koenig, W. In German. 1.50
Wiring diagram.

658-660 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Current-controlled relay arrangement. Ger. patent 744 095, Jan 8, 1944. Application L 102 372 VIIIb/21c, dated Nov 14, 1940. Inventor: Gutmann, H. In German. 1.50
Wiring diagrams.

661-663 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Equipment to eliminate failures in release of safety devices when switching-on inductive components (especially for quick-differential protection of transformers). Ger. patent 744 096, Jan 8, 1944. Application L 99 728 VIIIb/21c, dated Dec 20, 1939. Inventor: Gutmann, H. In German. 1.50

664-665 PB L 70432 — SIEMENS & HALSKE A. G., BERLIN. Check-circuit for a protective relay. Ger. patent 744 097, Jan 8, 1944. Application S 131 258 VIIIb/21c, dated Mar 2, 1938. Inventor: Ramelot, C. In German. 1.50
Wiring diagram.

666-667 PB L 70432 — ALLGEMEINE ELEKTRICITATS GES., BERLIN. Protective circuit with a safety switch for short circuit prevention. Ger. patent 744 098, Jan 8, 1944. Application L 97 626 VIIIb/21c, dated Apr 4, 1939. Inventors: Gonsior, J. and Naffin, W. In German. 1.50
Wiring diagram.

668-670 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Fuse cutout. Ger. patent 744 099, Jan 8, 1944. Application L 100 713 VIIIb/21c, dated Apr 27, 1940. Inventor: Wehrle, C. In German. 1.50
Drawings.

671-672 PB L 70432 — ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Spark gap for air-blow circuit breakers. Ger. patent 744 100, Jan 10, 1944. Application L 98761 VIIIb/21c, dated Aug 10, 1939. Inventors: Frdhauf, G. and Hattendorf, H. In German. 1.50

673-674 PB L 70432 — SIEMENS-SCHUCKERTWERKE A. G., BERLIN. Spark gap arrangement for overload protection. Ger. patent 744 101, Jan 18, 1944. Application S 138 879 VIIIb/21c, dated Oct 14, 1939. Inventors: Wandeberg, E. and Pinschke, G. In German. 1.50
Drawing.

675-677 PB L 70432 — SIEMENS SCHUCKERTWERKE A. G., BERLIN. Device for lowering central tap surge voltage of single and polyphase transformers. Ger. patent 744 102, Jan 17, 1944. Application S 140 836 VIIIb/21c, dated Apr 24, 1940. Inventor: Elsner, H. In German. 1.50
Wiring diagrams.

678-680 PB L 70432 — SIEMENS SCHUCKERTWERKE A. G., BERLIN. Overload arrester. Ger. patent 744 103, Jan 10, 1944. Application S 141 212 VIIIb/21c, dated Jun 4, 1940. Inventors: Kesselring, F. and Foitzik, R. In German. 1.50
Drawing.

681-682 PB L 70432 — BOSCH, ROBERT, G.M.B.H., STUTTGART, GERMANY. Low-powered refrigerator motor. Ger. patent 744 104, Jan 10, 1944. Application B 196 411 VIIId/21d1, dated Dec 11, 1941. Inventors: Rahmann, F. and Meier, H. In German. 1.50
Drawings.

683-684 PB L 70432 — ZEISS IKON A. G., DRESDEN, GERMANY. Method for increased output of (alkali metal) layers capable of secondary emission. Ger. patent 744 105, Jan 10, 1944. Application Z 25 471 VIIIc/21g, dated Sep 14, 1939. Inventor: Görlich, P. In German. 1.50

685-687 PB L 70432 — FERNSEH G.M.B.H., BERLIN. Process to increase depth definition in projection with high-vacuum cathode ray tubes having an inclined screen. Ger. patent 744 106, Jan 10, 1944. Application F 83455 VIIIc/21g, dated Aug 7, 1937. Inventor: Schwartz, E. In German. 1.50
Drawings.

688 PB L 70432 — I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Leather grease. Ger. patent 744 107, Jan 10, 1944. Application I 68 020 IVd/28a, dated Oct 12, 1940. Inventors: Otto, G. and others. In German. 1.50

689-690 PB L 70432 — VEREINIGTE GLANZSTOFF-FABRIKEN A. G., WUPPERTAL, GERMANY. Device for cutting continuous synthetic fiber bundles in staples. Ger. patent 744 108, Jan 10, 1944. Application V 37 478 VII/29a, dated Mar 4, 1941. Inventor: Maxton, A. In German. 1.50
Drawings.

691-693 PB L 70432 — VEREINIGTE GLANZSTOFF-FABRIKEN A. G., WUPPERTAL, GERMANY. Conveying system for rayon thread. Ger. patent 744 109, Jan 10, 1944. Application V 36 765 VII/29a, dated Jun 13, 1940. Inventor: Schwendinger, P. In German. 1.50
Drawings.

694-695 PB L 70432 — I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Equipment for production of synthetic yarns of arbitrary fineness. Ger. patent 744 110, Jan 10, 1941. Application I 61 826 VII/29a, dated Jul 7, 1938. Inventors: Fink, H. and von Recklinghausen, H. In German. 1.50
Supplement to patent 736 321. Drawing.

696-698 PB L 70432 — I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Equipment for production of synthetic yarns of arbitrary fineness. Ger. patent 744 111, Jan 10, 1944. Application I 61 889 VII/29a, dated Jul 10, 1938. Inventors: Fink, H. and von Recklinghausen, H. In German. 1.50
Supplement to patent 736 321. Drawings.

699-701 PB L 70432 — I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Equipment for production of synthetic yarns of arbitrary fineness. Ger. patent 744 112, Jan 10, 1944. Application I 65 271 VII/29a, dated Jul 28, 1939.

Inventors: Stahn, R. and Fink, H. In German. 1.50
Supplement to patent 736 321. Drawings.

702-703 PB L 70432 — VASENOL-WERKE DR. ARTHUR KÖPP K. G., LEIPZIG, GERMANY. Process for production of powders containing sulfur (for cosmetic and medicinal purposes). Ger. patent 744 113, Jan 10, 1944. Application V 36 221 IVa/30h, dated Oct 10, 1939. Inventor: Fiedler, H. In German. 1.50

704-706 PB L 70432 — ODELGA, J., ÄRZTLICH-TECHN. INDUSTRIE A. G., VIENNA, AUSTRIA. Sterilizer for laundry, instruments, etc. Ger. patent 744 115, Jan 10, 1944. Application O 25 068 IVa/301, dated Jul 17, 1941. Inventor: Kalasek, K. In German. 1.50
Drawings.

707-709 PB L 70432 — DÜRENER METALLWERKE A. G., BERLIN. Mold for casting plated ingots and plates. Ger. patent 744 116, Jan 10, 1944. Application D 80 473 VIa/31c, dated May 21, 1939. Inventor: Werning, K. In German. 1.50
Drawings.

710-712 PB L 70432 — GAUCHEL, W. (Inventor). Safety device for planers. Ger. patent 744 117, Jan 10, 1944. Application G 102 150 XII/38e, dated Aug 27, 1940. In German. 1.50
Drawings.

713-714 PB L 70432 — I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Fireproofing process for wood, paper, straw, etc. Ger. patent 744 118, Jan 10, 1944. Application I 62 867 IVd/38h, dated Nov 11, 1938. Inventors: Scheuermann, H. and Michelitsch, W. In German. 1.50

715-717 PB L 70432 — I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Plastics from superpolyamides. Ger. patent 744 119, Jan 11, 1944. Application P 79 712 IVc/39b, dated Sep 5, 1939. Inventor: Dykstra, H. In German. 1.50

718-720 PB L 70432 — BOGNAR, A. (Inventor). Process for dressing ores, etc. Ger. patent 744 120, Jan 10, 1944. Application B 181 614 VIa/40a, dated Jan 25, 1938. In German. 1.50

721-722 PB L 70432 — KOHLMEYER, E. and RETZLAFF, H. (Inventors). Process for improving the properties of pure aluminum. Ger. patent 744 121, Jan 10, 1944. Application K 150 057 VIa/40b, dated Mar 25, 1938. In German. 1.50

723-724 PB L 70432 — MAUZER WERKE A. G., OBERNDORF, GERMANY. Vernier calipers. Ger. patent 744 122, Jan 18, 1944. Application M 146 682 IKb/42b, dated Dec 13, 1939. Inventors: Maier, E. and Graf, J. In German. 1.50
Drawing.

725-727 PB L 70432 — ARGUS MOTOREN G.M.B.H., BERLIN. Regulator for aircraft engines. Ger. patent 744 123, Jan 18, 1944. Application A 84 423 Ia/46b², dated Oct 9, 1937. Inventors: Gosslau, F. and Schmidt, J. In German. 1.50
Drawings.

728-730 PB L 70432 — SIEMENS & HALSKE A. G., BERLIN. Conveyor system for surface treatment, especially for galvanic and electrochemical purposes. Ger. patent 744 124, Jan 10, 1944. Application S 142 462, dated Oct 2, 1940. Inventor: Kissel, W. In German. 1.50
Drawings.

731-733 PB L 70432 — BOLEY, G., WERKZEUG U. MASCHINENFABRIK, ESSLINGEN, GERMANY. Equipment for producing bore holes with convex surfaces. Ger. patent 744 125, Jan 10, 1944. Application B 192 528 Ib/49a, dated Nov 26, 1940. Inventor: Schuster, W. In German. 1.50
Drawings.

734-735 PB L 70432 — METALLGESELLSCHAFT A. G., FRANKFURT AM MAIN, GERMANY. Process to increase the yield of potato juice. Ger. patent 744 126, Jan 10, 1944. Application M 153 572 IVa/531, dated Mar 13, 1942. Inventor: Mattern, K. In German. 1.50
Drawings.

736-738 PB L 70432 — GESELLSCHAFT FÜR CHEMISCHE INDUSTRIE, BASEL, SWITZERLAND. Process for the production of pure, albumin-free acid casein. Ger. patent 744 127, Jan 10, 1944. Application G 105 185 IVa/531, dated Apr 10, 1942. Inventor: Schibler, L. In German. 1.50

739-743 PB L 70432 — MAJER, C. (Inventor). Machine for the production of cylindrical or conical containers of paper or pasteboard. Ger. patent 744 128, Jan 10, 1944. Application M 143 892 VII/54c, dated Jan 12, 1939. In German. 1.50
Supplement to patent 643 064. Drawings.

744-746 PB L 70432 — MACKENSEN, A. W., MASCHINENFABRIK UND EISENGIESSEREI G.M.B.H., MAGDEBURG, GERMANY. Centrifugal ember. Ger. patent 744 129, Jan 10, 1944. Application M 152 898 Ia/59b, dated Jan 8, 1942. Inventor: Bungarts, P. In German. 1.50
Drawing.

747-748 PB L 70432 — I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Fire-extinguishing substance. Ger. patent 744 130, Jan 11, 1944. Application I 62 514 IVb/61b, dated Sep 24, 1938. Inventor: Dachlauer, K. In German. 1.50

749-751 PB L 70432 — KRAFT, J. A., MASCHINENFABRIK, OLPE, GERMANY. Winding apparatus for rope, cables, wire, yarns, etc. Ger. patent 744 131, Jan 10, 1944. Application K 158 514 VII/73, dated Aug 23, 1940. Inventor: Haacke, H. In German. 1.50
Drawings.

752-754 PB L 70432 — SIEMENS SCHUCKERTWERKE A. G., BERLIN. Network control board. Ger. patent 744 132, Jan 10, 1944. Application S 140 891 VIIIb/74b, dated Apr 27, 1940. Inventor: Goebel, O. In German. 1.50
Diagram.

755-758 PB L 70432 — SCHOLLER, H. and EICKEMEYER, R. (Inventors). Fermenting process and equipment, especially for yeast production. Ger. patent 744 133, Jan 10, 1944. Application Sch 100076 IVa/6a, dated Jan 11, 1933. In German. 1.50
Drawings.

759-760 PB L 70432 — MANNESMANNRÖHREN-WERKE, DÜSSELDORF, GERMANY. Rolling mill for the manufacture of seamless pipe. Ger. patent 744 134, Jan 10, 1944. Application M 141 657, dated May 17,

1938. Inventor: Heetkamp, H. In German. 1.50
Drawing.

761-762 PB L 70432 DEUTSCHE GOLD UND SILBER SCHEIDE-ANSTALT, FRANKFURT AM MAIN, GERMANY. Retort for wood carbonization. Ger. patent 744 135, Jan 10, 1944. Application D 74 846 VIb/10a, dated Mar 14, 1937. Inventor: Reichert, T. In German. 1.50

763-764 PB L 70432 I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Process for separation of mixtures of high-molecular fatty acids. Ger. patent 744 136, Jan 20, 1944. Application I 67 281 IVd/12o, dated Jun 28, 1940. Inventors: Keunicke, E. and others. In German. 1.50

765-766 PB L 70432 TRUMPLER & RIESS CO., WORMS, GERMANY. Process for preparation of sulfonation products. Ger. patent 744 137, Jan 15, 1944. Application C 52 828 IVd/12o, dated May 19, 1937. Inventor: Riess, W. In German. 1.50

767-768 PB L 70432 I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Process for preparation of phenol-amine-aldehyde condensation products. Ger. patent 744 138, Jan 20, 1944. Application I 54 217 IVc/12q, dated Feb 1, 1936. In German. 1.50

769-770 PB L 70432 RÜTGERSWERKE A. G., BERLIN. Process to increase the fusion point of coal tar pitch. Ger. patent 744 139, Jan 11, 1944. Application R 98 677 IVd/12r, dated Feb 25, 1937. Inventor: Taeger, E. In German. 1.50

771-772 PB L 70432 AKTIENGESELLSCHAFT VORM. SKODAWERKE, PILSEN, CZECHOSLOVAKIA. Manufacturing process for armor plate. Ger. patent 744 140, Jan 11, 1944. Application A 79 672 VIa/18c, dated Jun 16, 1936. Inventors: Poboul, F. and others. In German. 1.50

773-774 PB L 70432 VEREINIGTE EISENBAHN-SIGNALWERKE G.M.B.H., BERLIN. Control equipment for railway signal lights. Ger. patent 744 141, Jan 10, 1944. Application V 34 883 II/20i, dated May 25, 1938. Inventor: Jacobsen, U. In German. 1.50
Diagram.

775-778 PB L 70432 DEUTSCHE TELEPHONWERKE UND KABEL-INDUSTRIE A. G., BERLIN. Circuit for dial system telephone extension installations. Ger. patent 744 142, Jan 10, 1944. Application D 74 118 VIIIa/21a^3, dated Dec 11, 1936. Inventor: Hardt, A. In German. 1.50
Wiring diagrams.

779-780 PB L 70432 TELEFUNKEN GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M.B.H., BERLIN. Superheterodyne receiver with a multi-grid mixer tube. Ger. patent 744 143, Jan 26, 1944. Application T 40940 VIIIa/21a^4, dated Jun 5, 1932. Inventor: Jobst, G. In German. 1.50

781-783 PB L 70432 ATELIERS DE CONSTRUCTIONS ELECTRIQUES DE DELLE, S. A., PARIS. Device to reduce the flashover interval in switch operation. Ger. patent 744 144, Jan 10, 1944. Application A 74 855 VIIIb/21c, dated Dec 18, 1934. In German. 1.50
Drawings.

784-786 PB L 70432 SIEMENS & HALSKE A. G., BERLIN. Multiple vacuum switch. Ger. patent 744 145, Jan 10, 1944. Application S 139 416 VIIIb/21c, dated Dec 2, 1939. Inventors: Lindner, W. and Werner, K. In German. 1.50
Drawings.

787-788 PB L 70432 SIEMENS-SCHUCKERTWERKE A. G., BERLIN. Arrangement for suppression of harmonics in iron-containing A.C. transformers. Ger. patent 744 146, Jan 10, 1944. Application S 130 887 VIIId/21d^2, dated Jan 27, 1932. Inventors: Rüdenberg, R. and Friedländer, E. In German. 1.50
Wiring diagram.

789-791 PB L 70432 KOCH & STERZEL A. G., DRESDEN, GERMANY. Transformer. Ger. patent 744 147, Jan 10, 1944. Application K 154 067 VIIId/21e, dated Apr 9, 1939. Inventor: Günther, E. In German. 1.50
Diagrams.

792-795 PB L 70432 VAN DYCK, A. (Inventor). Vacuum tube filament consisting of a hollow wire. Ger. patent 744 148, Jan 10, 1944. Application D 76 608, dated Nov 16, 1937. In German. 1.50
Drawings.

796-797 PB L 70432 LORENZ, C., A. G., BERLIN. Process for producing magnet cores, etc., from metal powder. Ger. patent 744 149, Jan 10, 1944. Application L 92 942 VIIIc/21g, dated Jul 24, 1937. Inventor: Brinkmann, H. In German. 1.50

798-799 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Band-pass filter of fitted links with various damping properties, consisting merely of parallel resonance circuits. Ger. patent 744 150, Jan 10, 1944. Application A 79 938 VIIIc/21g, dated Jul 9, 1936. Inventor: Piloty, H. In German. 1.50
Wiring diagrams.

800-801 PB L 70432 HERAEUS-VACUUMSCHMELZE A. G., HANAU, GERMANY. Coil for coreless induction furnaces. Ger. patent 744 151, Jan 11, 1944. Application H 149 787 VIIIc/21h, dated Dec 4, 1936. In German. 1.50

802-804 PB L 70432 ALLGEMEINE ELEKTRICITÄTS GES., BERLIN. Circuit for spot and seam welders with modulator welding control. Ger. patent 744 152, Jan 10, 1944. Application A 84 485 VIIIc/21h, dated Oct 13, 1937. Inventors: Bietsch, E. and Haake, G. In German. 1.50
Wiring diagrams.

805-806 PB L 70432 S. A. DES ATELIERS DE SECHERON, GENEVA, SWITZERLAND. Welding rod for welding by electrically or chemically produced heat. Ger. patent 744 153, Jan 10, 1944. Application S 108 546 VIIIc/21h, dated Jun 23, 1932. In German. 1.50

807-809 PB L 70432 VEREINIGTE ALUMINIUMWERKE A. G., LAUSITZ, GERMANY. Process for coating light metal welding rods, especially for arc welding. Ger. patent 744 154, Jan 11, 1944. Application V 34 273 VIIIc/21h, dated Oct 31, 1937. Inventors: Röhrig, H. and Auchter, C. In German. 1.50

810-812 PB L 70432 LINDE AIR PRODUCTS CO., NEW YORK, N. Y. Welding process in which materials

such as manganese silicates, etc., are placed on the welding seam, and into which the electrode is dipped. Ger. patent 744 155, Jan 11, 1944. Application U 12 496 VIIIc/21h, dated Feb 20, 1934. In German. 1.50

813-814 PB L 70432 I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Process for preparation of chrome dyes of the phthalein series. Ger. patent 744 156, Jan 18, 1944. Application I 55 731 IVd/22b, dated Aug 12, 1936. Inventors: Eckert, W. and Schilling, K. In German. 1.50
Supplement to patent 692 708.

815-816 PB L 70432 BRAUNKOHLE-BENZIN A. G., BERLIN. Method for corrosion prevention in pipe lines for tar-free byproduct gases. Ger. patent 744 157, Jan 10, 1944. Application B 193 873, dated Apr 2, 1941. Inventor: Klier, S. In German. 1.50

817-818 PB L 70432 DIBBERN, G. (Inventor). Rubber riser and pouring gate patterns. Ger. patent 744 158, Jan 10, 1944. Application D 85 430 VIa/31c, dated Jul 1, 1941. In German. 1.50
Drawings.

819-822 PB L 70432 GLYCO-METALL-WERKE DAELEN & LOOS, WIESBADEN, GERMANY. Process for production of metallic coatings on metal strips. Ger. patent 744 159, Jan 10, 1944. Application G 103 072 VIa/31c, dated Feb 23, 1941. Inventor: Gumprecht, H. In German. 1.50
Drawings.

823-825 PB L 70432 S. A. G. DUMONT ET FRERES, SCLAIGNEAUX, BELGIUM. Process and apparatus for condensation of zinc vapor. Ger. patent 744 160, Jan 10, 1944. Application S 135 764 VIa/40a, dated Feb 5, 1939. Inventor: Neve, F. In German. 1.50
Drawings.

826-828 PB L 70432 ASKANIA WERKE A. G., BERLIN. Fixed gyro for determination of angular acceleration. Ger. patent 744 161, Jan 10, 1944. Application A 81 216 IXb/42c, dated Nov 28, 1936. Inventor: von Manteuffel, G. In German. 1.50
Drawings.

829-830 PB L 70432 ZEISS IKON A. G., DRESDEN, GERMANY. Process for exposure measurements. Ger. patent 744 162, Jan 11, 1944. Application Z 25 017 IXa/42h, dated Jan 14, 1939. Inventor: Bartels, H. In German. 1.50

831-832 PB L 70432 BRAUNSCHWEIGER HÜTTENWERK G.M.B.H., BRAUNSCHWEIG, GERMANY. Manufacturing process for babbitt bearing bushings. Ger. patent 744 163, Jan 11, 1944. Application B 182 003 VIa/48b, dated Feb 20, 1938. Inventor: Meier, E. In German. 1.50
Supplement to patent 708 048.

833-834 PB L 70432 BRUNNER, W. (Inventor). Roll film. Ger. patent 744 164, Jan 10, 1944. Application dated Apr 28, 1934. In German. 1.50
Supplement to patent 638 733. Drawings.

835-836 PB L 70432 MESSERSCHMITT A. G., AUGSBURG, GERMANY. Fuselage with pressurized cabin. Ger. patent 744 165, Jan 10, 1944. Application M 146 304 XI/62b, dated Nov 5, 1939. Inventor: Hägelschäffer, F. In German. 1.50
Drawings.

837-839 PB L 70432 AMBI-BUDD PRESSWERK G.M.B.H., BERLIN. Automobile body. Ger. patent 744 166, Jan 10, 1944. Application A 81 920 II/63c, dated Feb 6, 1937. Inventor: Schaefer, K. In German. 1.50
Drawings.

840-841 PB L 70432 VEREINIGTE KUGELLAGERFABRIKEN A. G., SCHWEINFURT, GERMANY. Tubular head piece for textile spindles. Ger. patent 744 167, Jan 10, 1944. Application V 35 544 VII/76c, dated Jan 5, 1939. Inventors: Stahlecker, W. and Schmid, E. In German. 1.50
Drawings.

842-843 PB L 70432 I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Process for the manufacture of cement. Ger. patent 744 168, Jan 10, 1944. Application I 49 936 VIb/80b, dated Jun 17, 1934. Inventors: Daimler, K. and Thron, H. In German. 1.50

844-845 PB L 70432 ZÖLLER, A. (Inventor). Magnetic separator. Ger. patent 744 169, Jan 10, 1944. Application Z 27 963 VIb/1b, dated May 25, 1943. In German. 1.50
Drawings.

846-848 PB L 70432 SCHÜCHTERMANN & KREMER-BAUM A. G. FÜR AUFBEREITUNG, DORTMUND, GERMANY. Floating and dropping receptacle for coal seperation. Ger. patent 744 170, Jan 10, 1944. Application Sch 124 433 VIb/1c, dated Mar 19, 1942. Inventor: Schmitgen, A. In German. 1.50
Drawing.

849-850 PB L 70432 FATTINGER, H. (Inventor). Bread baking process. Ger. patent 744 171, Jan 11, 1944. Application F 90 399 IVa/2c, dated Aug 15, 1941. In German. 1.50

851-852 PB L 70432 BERNHARDT, H. (Inventor). Luminous Christmas-tree ornament. Ger. patent 744 172, May 31, 1944. Application B 199 569 IXa/4b, dated Sep 12, 1942. In German. 1.50
Drawings.

853-855 PB L 70432 ILBERG, A. (Inventor). Mining and handling apparatus for working ore in seams. Ger. patent 744 173, Jan 10, 1944. Application I 69 084 VIb/5b, dated Mar 11, 1941. In German. 1.50
Supplement to patent 720 812. Drawings.

856-858 PB L 70432 MALTER, F. and MANN, A. (Inventors). Knives for bilateral coal cutting machine. Ger. patent 744 174, Jan 10, 1944. Application M 156 907 VIb/5b, dated Feb 27, 1943. In German. 1.50
Drawings.

859-862 PB L 70432 DÜSTERLOH, G., FABRIK FÜR BERGWERKSBEDARF G.M.B.H., SPROCKHÖVEL, GERMANY. Support for mine ceilings. Ger. patent 744 175, Jan 11, 1944. Application D 79 729 VIb/5c, dated Jan 24, 1939. Inventor: Wiedelmann, K. In German. 1.50
Drawings.

863-866 PB L 70432 STICH, E. (Inventor). Process and equipment for production of yeast - or for simultaneous production of yeast and alcohol. Ger. patent

744 176, Jan 11, 1944. Application St 61 912 IVa/6a, dated Jun 6, 1942. In German. 1.50
Drawings.

867-868 PB L 70432 SINGER, F. (Inventor). Process for cold-working oxide and scale-coated steel pipe. Ger. patent 744 177, Jan 11, 1944. Application S 137 176 Ib/7b, dated May 24, 1939. In German. 1.50

869-871 PB L 70432 I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Process for dyeing or producing designs on fibrous materials. Ger. patent 744 178, Jan 21, 1944. Application I 70 591 IVd/8m, dated May 28, 1939. Inventor: Häuslein, J. In German. 1.50

872-873 PB L 70432 BERGFELD, K. (Inventor). Carbonization process for oleiferous and bituminous rocks such as asphalt and oil shale. Ger. patent 744 182, Jan 25, 1944. Application B 180 102 VIb/10a, dated Sep 28, 1937. In German. 1.50

874-875 PB L 70432 I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Packing for fractionating columns. Ger. patent 744 183, Jan 12, 1944. Application I 69 959 IVa/12a, dated Jun 29, 1941. Inventor: Loers, F. In German. 1.50
Drawing.

876-877 PB L 70432 RUHRCHEMIE A. G., OBERHAUSEN, GERMANY. Catalytic process for CO hydrogenation. Ger. patent 744 184, Feb 25, 1944. Application R 107 457 IVd/12o, dated Apr 30, 1940. Inventors: Alberts, L. and Feisst, W. In German. 1.50

878-880 PB L 70432 RUHRCHEMIE A. G., OBERHAUSEN, GERMANY. Process for CO hydrogenation over contacts suspended in a liquid medium. Ger. patent 744 185, Jan 26, 1944. Application R 109 563 IVd/12o, dated Mar 11, 1941. Inventors: Tramm, H. and Wischermann, W. In German. 1.50

881-882 PB L 70432 I. G. FARBENINDUSTRIE A. G., FRANKFURT AM MAIN, GERMANY. Process for the production of esters. Ger. patent 744 186, Jan 11, 1944. Application I 71 093 IVd/12o, dated Dec 14, 1941. Inventors: Becke, F. and Keller, C. In German. 1.50

883-884 PB L 70432 GESELLSCHAFT FÜR KOHLENTECHNIK G.M.B.H., DORTMUND, GERMANY. Process for oxidic decomposition of lignite, peat, etc. Ger. patent 744 187, Jan 20, 1944. Application G 101 127 IVd/12o, dated Jan 6, 1940. Inventors: Dohse, H. and Hoess, E. In German. 1.50
Supplement to patent 721 000.

885-887 PB L 70432 NEESEN, F. (Inventor). Streamlined steam locomotive. Ger. patent 744 188, Jan 12, 1944. Application N 44 913 II/20b, dated Jul 11, 1941. In German. 1.50
Drawings.

888-891 PB L 70432 PINTSCH, J., K. G., BERLIN. Automatic control for a train heating system. Ger. patent 744 189, Jan 12, 1944. Application P 80 762 II/20c, dated May 11, 1940. Inventor: Göpfert, M. In German. 1.50
Supplement to patent 725 329. Wiring diagrams.

892-894 PB L 70432 BREMSHEY & CO., SOLINGEN, GERMANY. Reversible seat for street cars. Ger. patent 744 190, Sep 29, 1944. Application B 193 723 II/20c, dated Mar 25, 1941. In German. 1.50
Drawings.

895-896 PB L 70432 BERLINER MASCHINENBAU A. G., BERLIN. Triaxial truck for railway cars. Ger. patent 744 191, Jan 12, 1944. Application B 196 933 II/20d, dated Jan 30, 19 (illegible). Inventor: Eckhardt, F. In German. 1.50
Drawings.

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